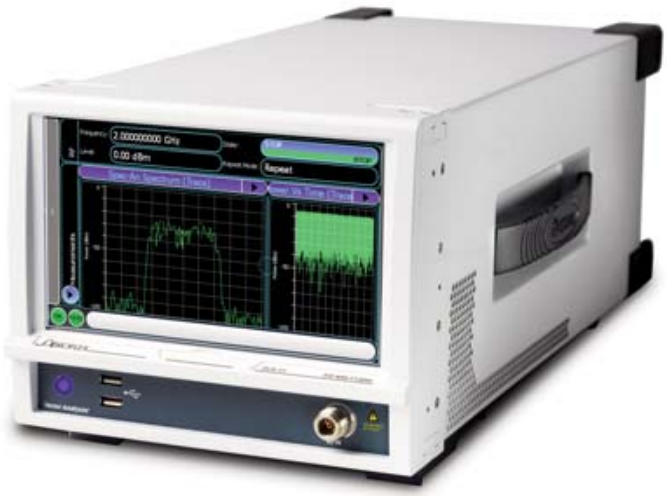
Contents

S-Series SVA Vector Signal Analyzer



Remote Command Reference Manual

Document part no. 47090/128 (PDF version)

S-Series SVA

VECTOR SIGNAL ANALYZER

Remote Command Reference Manual

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Associated publications

If you want to…	Refer to…
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View operating information for the instrument in html Help format	**SVA Vector Signal Analyzer Help** Part no. 47090/126 On the CD-ROM and at www.aeroflex.com/
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View operating information for the instrument in a printed format.	**SVA Vector Signal Analyzer Operating Manual** Part no. 467000/127 Available as an optional extra

Contents

REMOTE OPERATION COMMANDS

Purpose

This document describes GPIB remote commands that are supported on the Aeroflex S-Series SVA Vector Signal Analyzer. This document describes various SCPI (standard commands for programmable instruments) mandatory and common commands required to support the instrument, together with IEEE optional commands

Introduction

This instrument may be operated remotely via an interface that conforms to:

IEEE Std 488.1-1987, which defines the electrical, mechanical and low-level protocol characteristics of the bus structure, the GPIB (general purpose interface bus)

IEEE Std 488.2-1987, which defines standard codes, formats, protocols and common commands for use with IEEE Std 488.1.

The instrument is not fully compliant with SCPI because many product features are not covered by that standard, and modern software trends favor the use of instrument drivers as a means of achieving interchangeability.

However, we recognize that SCPI is in common use by system developers and a number of SCPI features that make system integration easier have been implemented. These include the command mnemonic derivation rules (long and short form) and many of the most frequently used commands themselves. Refer to SCPI 1999 (standard available from the IVI Foundation) for details.

Where to find commands

Commands are grouped into particular subsystems on the following pages, as shown in the Contents. Under each heading is an overview of the commands within that subsystem, which helps you quickly locate commands by function. Commands are arranged alphabetically within subsystems.

CONVENTIONS USED IN THIS MANUAL

Abbreviations

Long and short forms

The elements of compound and query headers have a long and a short form, as defined by SCPI. Either the long or the short form may be entered as a command; other abbreviations are not permissible.

Example:

```
STATus:OPERation:EVENt?
```

is interpreted the same as

```
STAT:OPER:EVEN
```

The short form is marked by upper-case letters, the long form corresponds to the complete word. Upper-case and lower-case serve the above purpose only, as the instrument itself does not make any distinction between upper-case and lower-case letters.

Queries always return the short form, or a numeric response in those cases where the command provides a choice of numeric or character data.

Bracketed elements

Square brackets[ ]

Elements within the compound common program header structure that are enclosed within square brackets are optional and therefore may be omitted; the instrument processes the command in the same manner whether the bracketed element is included or not.

Example:

```
TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:TYPE
```

is interpreted the same as

```
TRIGger:TYPE
```

This applies to parameters also. The ability to recognize the full command length ensures that the instrument complies with the SCPI standard.

Angle brackets < >

Text within angle brackets represents an actual value that needs to be inserted: for example, <freq> shows that you need to insert a frequency value in the command at this point.

Case

The software is not case-sensitive. Upper- and lower-case characters are interchangeable. There is no conflict between milli (m) and mega (M) as both cannot be applied to the same data.

Choices

The vertical bar (|)

- separates a choice of parameters:

  for example, 0|1 means ‘0 or 1’

  or

- separates a choice of commands:

  for example, the vertical bar in[SOURce][:MODulation]:AM[1]|2[:DEPTh]means that you can set the AM depth for either path 1 or path 2 (path 1 is the default): the short-form versions of the commands are AM or AM2.

Compound program headers

Compound program headers allow a complex set of commands to be built up from a smaller set of basic elements in a tree structure. The elements of a compound program header are separated by a colon (:), each colon representing a change of level in the hierarchy. Each subsystem in this instrument is organized as a separate tree structure.

The compound program header may, optionally, be followed by one or more parameters encoded as program data functional elements.

Example:

```
SYSTem:COMMunicate:ETHernet:ADDRess
```

Note: *A leading colon is optional*

Program data

Program data functional elements contain the parameters related to the program header(s). The following program data functional elements are accepted by the instrument:

<CPD> (also known as <CHARACTER PROGRAM DATA>)

<NRf> (also known as <DECIMAL NUMERIC PROGRAM DATA>)

<ARBITRARY BLOCK PROGRAM DATA>

These functional elements are defined in IEEE 488.2 and the SCPI Syntax and Style handbook.

A white space must separate the command header(s) and the program data.

<white space>, as defined in IEEE Std 488.2, can be any number of ASCII characters in the range 0–9, 11–32 decimal.

<white space> is also allowed at other points in a message.

<CPD>

CPD (character program data) sets a parameter to one of a number of states that are best described by short alphanumeric strings.

Example:

ON

<NRf>

NRf (numeric representation, flexible) covers integer and floating-point representations.

Examples:

–466	Integer value
4.91	Explicitly-placed decimal point
59.5E+2	Mantissa and exponent representation

The format is known as ‘flexible’ because any of the three representations may be used for any type of numeric parameter.

Examples:

Where a parameter requires an integer value in the range 1 to 100, and you need to set its value to 42, the following values are accepted by the instrument:

42	Integer
42.0	Floating point
4.2E1, 4200E–2	Floating point – mantissa/exponent
41.5	Rounded up to 42
42.4	Rounded down to 42

<STRING PROGRAM DATA>

String program data consists of a number of ASCII characters enclosed in quotes. Use either pairs of single (ASCII 39) or double (ASCII 34) quotes, but do not mix single and double in a string. A quote within a string must be enclosed within an extra pair of quotes.

Example:

'This string contains the word ' 'Hello' ' '

is interpreted as

This string contains the word 'Hello'

and

"This string contains the word " "Hello" " "

is interpreted as

This string contains the word "Hello".

<Boolean>

<Boolean> is used as shorthand for the form ON | OFF | <NRf>. Boolean parameters have a value of 0 or 1 and are unitless.

On input, an <NRf> is rounded to an integer, and a nonzero result is interpreted as 1.

<CPD> elements ON and OFF are accepted as inputs, with ON corresponding to 1 and OFF corresponding to 0. Queries return 1 or 0, never ON or OFF.

Examples:

ON is interpreted as 1

0.4 is interpreted as 0

2.8 is interpreted as 1

Response data

The following response data functional elements are generated by the instrument:

<CRD> (also known as <CHARACTER RESPONSE DATA>)

<NR1>
<NR2>
<STRING RESPONSE DATA>

<CRD>

CRD (character response data) is returned when reading the value of a parameter that can take a number of discrete states. States are represented by short alphanumeric strings.

Example:

ON

<NR1>

This type of NR (numeric response) returns the value of integer parameters, such as an averaging number or the number of measurement points.

Examples:

15
+3
−57

<NR2>

This type of NR (numeric response) includes an explicitly placed decimal point, but no exponent.

Examples:

17.91
−18.27
+18.83

Extended numeric parameters

Most subsystems use extended numeric parameters to specify physical quantities. Extended numeric parameters accept all numeric parameter values and other special values as well.

The following are examples of extended numeric parameters:

100	any simple numeric value
−100mV	negative 100 millivolts
10DEG	10 degrees

Extended numeric parameters also include the following special parameters:

MINimum | MAXimum

The special form numeric parameters MINimum and MAXimum assume the limit values for the parameter. The maximum and minimum may be queried by sending <header>? MAXimum | MINimum. The MAXimum value refers to the largest value to which the function can currently be set, and MINimum refers to the value closest to negative infinity to which the function can currently be set.

COMMON COMMANDS

Commands recognized by all IEEE 488.2 instruments

All SCPI instruments must implement the common commands declared mandatory by the IEEE 488.2 standard. These commands have the same effect on any instrument that conforms to the standard. The headers of these commands consist of an asterisk (*) followed by three letters. Many common commands refer to the status reporting system.

The most important of the common commands is *RST, which places the instrument in a defined state. It is good practice to send *RST at the start of any program.

***CLS**
***ESE\?**
***ESR?**
***IDN?**
***OPC\?**
***OPT?**
***PSC?**
***RST**
***SAV**
***SRE\?**
***STB?**
***TST?**
***WAI**

*CLS

Description: Clear status clears the standard event register, the error/event queue, the operation status register and the questionable status register.

Parameters: None

*ESE

Description: The event status enable command sets the standard event status enable register to the value specified. This is an eight-bit register.

Parameters: <NRf>
Mask

Valid values: Mask: integer. Valid values are 0 to 255. Values outside the range are rejected and an error generated.

*ESE?

Description: Reads the event status enable register. This is an eight-bit register. The contents of the event status enable register are returned in decimal form.

Parameters: None

Response: <NR1>
Mask

Returned values: Mask: integer. Values are in the range 0 to 255.

*ESR?

Description: Reads the value of the standard event status register. This is an eight-bit register. The contents of the register are returned in decimal form. Subsequently the register is set to zero.

Parameters: None

Response: <NR1>
Register contents

Returned values: Register contents: integer. Values are in the range 0 to 255.

*IDN?

Description: The identification query command allows information about the instrument to be read.

Parameters: None

Response: <arbitrary ASCII response data>

Manufacturer, model, serial number, software part number and issue number

Returned values: Manufacturer: string

Always returns 'Aeroflex'.

Model: string

This is the instrument's model number in the form 'NSVA Vector Signal Analyzer'

Serial number: string

This is in the form ssssss/sss *where* s *is an* ASCII *digit in the range* 0 to 9.

Software part number and issue number: string

This is in the form ppppp/ppp/ii.ii *where* p *and* i *are* ASCII *digits in the range* 0 to 9.

*OPC

Description: The operation complete command sets the operation complete bit (bit 0) in the standard event status register when execution of the preceding operation is complete. This bit can be used to initiate a service request.

*OPC should be the final <program message unit> of the <program message>.

Parameters: None

*OPC?

Description: The operation complete query returns a '1' when the preceding operation has completed.

*OPC? should be the final <query message unit> of the <program message>.

Parameters: None

Response: <NR1>
Operation complete

Returned values: Operation complete: integer. Value is 1.

*OPT?

Description: Reads hardware options present. If no options are present a single '0' is returned, otherwise the response is up to six strings separated by commas.

Parameters: None

Response: <arbitrary ASCII response data>
Options

Returned values: Options: string

*PSC

Description: Sets the contents of the status registers to be maintained.

*PSC = 0 causes the contents of the status registers to be maintained

*PSC = 1 resets the registers.

Parameters: <NR1>

Valid values: 0 | 1

*PSC?

Description: Determines whether the content of the ENABle registers is maintained or reset when the instrument is switched on.

Parameters: None

Response: <NR1>

Returned values: 0 | 1

*RST

Description: Resets the instrument to a known configuration appropriate for remote operation.

Parameters: None

*SAV

Description: Stores the current device state to a file with the specified number

Parameters: <NR1>

Valid values: 0 to 99

*SRE

Description: Sets the service request enable register. This is an eight-bit register.

Parameters: <NRf>
Mask

Valid values: Mask: integer. Valid values are 0 to 255. Values outside range are rejected and an error is generated.

*SRE?

Description: Reads the service request enable register. This is an eight-bit register.

Parameters: None

Response: <NR1>
Mask

Returned values: Mask: integer. Values are in the range 0 to 255.

*STB?

Description: Reads the status byte. This is an eight-bit register.

Parameters: None

Response: <NR1>
Status byte

Returned values: Status byte: integer. Values are in the range 0 to 255.

*TST?

Description: Self test query. Returns a ‘0’ when the remote operation interface and processor are operating correctly.

Parameters: None

Response: <NR1>
Self test completed

Returned values: Self test completed: integer. Value is 0.

*WAI

Description: Wait-to-continue command. Prevents servicing of subsequent commands until all preceding commands have been executed and all signals have settled.

Parameters: None

IEEE OPTIONAL COMMANDS

IEEE optional commands, also referred to as instrument-control commands, are based on a hierarchical structure and can be represented in a command tree. The command headers are built with one or several mnemonics (keywords). The first-level (root-level) mnemonic identifies a complete command system, for example:

> **SOUR**ce: this mnemonic identifies the SOURce command system, which provides generator settings.

The same mnemonics may be used on different command levels, not necessarily with the same meaning. The actual meaning of a mnemonic depends on its position in the command header.

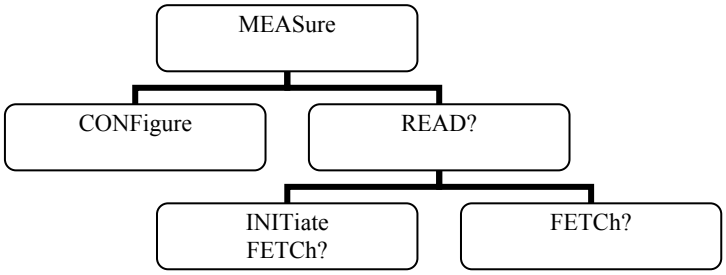
In the following sections, most of the commands are generic in nature and hence should be used when a particular system needs to implement that measurement. SYSTEMNAME should be replaced with the particular plugin name.

Measurement functions READ, FETCh, CONFigure, TRACe, TRIGger and ROUTe are generic commands.

MEASUREMENT FUNCTIONS

The measurement functions acquire data using a set of high-level instructions. They include exhibiting command and query characteristics.

The measurement block can be depicted as:



READ commands

The READ? query is identical to:

ABORt;

INITiate;

FETCh:

The READ? function provides a method of performing a FETCh? operation on fresh data.

READ
[:<SYSTEMNAME>]
(alias READ:<FWA>)
[:MEASurement<i>]
:ACP|:ACPR|:ACLR?
:CHANnel?
:LEVel?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:POWer?
:CCDF?
:CDE?<SCARrier>
:CDP?<SCARrier>
:CONStellation? **:CPVTime?**
:EVSYmbol?
:FREQuency
:PEAK?

:MACCuracy
(alias MODulation)
:EVM
:PEAK?
:RMS? **:FERRor?**
:OBW?
:LOWer?
:UPPer?
:POWer
:AVERage?
:PEAK?
:PVTime?
:SFLatness?
:SMASk?
:FREQuency?
:LEVel?
:STATus?
:SPECtrum?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR?

Description: Starts a new measurement and retrieves the value of adjacent channel power, or adjacent channel power ratio, or adjacent channel leakage ratio.

Response: <NR1>

Returned values: <ACP | ACPR | ACLR>

Example: READ:ACP|:ACPR|:ACLR?

READ:WLAN:MEAS1:ACP|:ACPR|:ACLR?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:CHANnel?

Description: Starts a new measurement and retrieves the channel of adjacent channel power.

Response: <NRf> unit

Returned values: <Channel>

Example: READ:ACP|:ACPR|:ACLR:CHAN?

READ:WLAN:MEAS1:ACP|:ACPR|:ACLR:CHAN?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:LEVel :CENTer?

Description: Starts a new measurement and retrieves the center level of adjacent channel power.

Response: <NR2>

Returned values: <Level>

Example: READ:ACP|:ACPR|:ACLR:LEV:CENT?

READ:CDMA:MEAS1:ACP|:ACPR|:ACLR:LEV:CENT?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:LEVel :LOWer?

Description: Starts a new measurement and retrieves the lower level of adjacent channel power.

Parameters: Instance <NR1>

Response: <NR2>

Returned values: <Level>

Example: READ:ACP|:ACPR|:ACLR:LEV:LOW?

READ:CDMA:MEAS1:ACP|:ACPR|:ACLR:LEV:LOW?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:LEVel :UPPer?

Description: Starts a new measurement and retrieves the upper level of adjacent channel power.

Parameters: Instance <NR1>

Response: <NR2>

Returned values: <Level>

Example: READ:ACP|:ACPR|:ACLR:LEV:UPP?

READ:CDMA:MEAS1:ACP|:ACPR|:ACLR:LEV:UPP?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:OFFSet :CENTer?

Description: Starts a new measurement and retrieves the center frequency of adjacent channel power.

Response: <NRf> ± double

Returned values: <Offset>

Example: READ:ACP|:ACPR|:ACLR:OFFS:CENT?

READ:CDMA:MEAS1:ACP|:ACPR|:ACLR:OFFS:CENT?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:OFFSet :LOWer?

Description: Starts a new measurement and retrieves the lower offset of adjacent channel power.

Parameters: Instance <NR1>

Response: <NR2> ± double

Returned values: <Offset>

Example: READ:ACP|:ACPR|:ACLR:OFFS:LOW?

READ:CDMA:MEAS1:ACP|:ACPR|:ACLR:OFFS:LOW?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:OFFSet :UPPer?

Description: Starts a new measurement and retrieves the upper offset of adjacent channel power.

Parameters: Instance <NR1>

Response: <NRf> ± double

Returned values: <Offset>

Example: READ:ACP|:ACPR|:ACLR:OFFS:UPP?

READ:CDMA:MEAS1:ACP|:ACPR|:ACLR:OFFS:UPP?

READ[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:POWer?

Description: Starts a new measurement and retrieves the adjacent channel power.

Response: <NR2> ± double

Returned values: <Power>

Example: READ:ACP|:ACPR|:ACLR:POW?

READ:WLAN:MEAS1:ACP|:ACPR|:ACLR:POW?

READ[:<SYSTEMNAME>][:MEAS<i>]:CCDF?

Description: Starts a new measurement and retrieves the complementary cumulative distribution function value.

Response: <NR1>

Example: READ:CCDF?

READ:LTE:MEAS1:CCDF?

READ[:<SYSTEMNAME>][:MEAS<i>]:CDE?

Description: Starts a new measurement and retrieves the code domain error value for a given subcarrier.

Response: <NR1>

Example: READ:CDE?<SCARrier>

READ:LTE:MEAS1:CDE?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:CDP?

Description: Starts a new measurement and retrieves the code domain power value for a given subcarrier.

Response: <NR1>

Example: READ:CDP?<SCARrier>

READ:LTE:MEAS1:CDP?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:CONStellation?

Description: Starts a new measurement and retrieves the constellation value.

Response: <NR1>

Example: READ:CONS?

READ:LTE:MEAS1:CONS?

READ[:<SYSTEMNAME>][:MEAS<i>]:CPVTime?

Description: Starts a new measurement and retrieves the captured power vs. time value.

Response: <NR1>

Example: READ:CPVT?

READ:LTE:MEAS1:CPVTime?

READ[:<SYSTEMNAME>][:MEAS<i>]:EVSYmbol?

Description: Starts a new measurement and retrieves the EVM vs. symbol value.

Response: <NR1>

Example: READ:EVSY?

READ:LTE:MEAS1:EVSY?

READ[:<SYSTEMNAME>][:MEAS<i>]:FREQuency:PEAK?

Description: Starts a new measurement and retrieves the peak frequency of the measurement.

Response: <NR2>

Returned values: <Frequency>

Example: READ:FREQ:PEAK?

READ:ANAL:MEAS1:FREQ:PEAK?

READ[:<SYSTEMNAME>][:MEAS<i>]:MACCuracy:EVM:PEAK?

Description: Starts a new measurement and retrieves the error vector magnitude (peak) of modulation accuracy.

Response: <NR2>

Returned values: <PEAK>

Example: READ:MACC:EVM:PEAK?

READ:UMTS:MEAS1:MACC:EVM:PEAK?

READ[:<SYSTEMNAME>][:MEAS<i>]:MACCuracy:EVM:RMS?

Description: Starts a new measurement and retrieves the error vector magnitude (RMS) of modulation accuracy.

Response: <NR2> double

Returned values: <ERMS>

Example: READ:MACC:EVM:RMS?

READ:UMTS:MEAS1:MACC:EVM:RMS?

READ[:<SYSTEMNAME>][:MEAS<i>]:MACCuracy:FERRor?

Description: Starts a new measurement and retrieves the frequency error of modulation accuracy.

Response: <NR2> double

Returned values: <Freq>

Example: READ:MACC:FERR?

READ:UMTS:MEAS1:MACC:FERR?

READ[:<SYSTEMNAME>][:MEAS<i>]:OBW?

Description: Starts a new measurement and retrieves the occupied bandwidth.

Response: <NR2> double

Returned values: <Bandwidth>

Example: READ:OBW?

READ:LTE:MEAS1:OBW?

READ[:<SYSTEMNAME>][:MEAS<i>]:OBW:LOWer?

Description: Starts a new measurement and retrieves the lower level of occupied bandwidth.

Response: <NRf> double

Returned values: <Bandwidth>

Example: READ:OBW:LOW?

READ:LTE:MEAS1:OBW:LOW?

READ[:<SYSTEMNAME>][:MEAS<i>]:OBW:UPPer?

Description: Starts a new measurement and retrieves the upper level of occupied bandwidth.

Response: <NR2> double

Returned values: <Bandwidth>

Example: READ:OBW:UPP?

READ:LTE:MEAS1:OBW:UPP?

READ[:<SYSTEMNAME>][:MEAS<i>]:POWer:AVERage?

Description: Starts a new measurement and retrieves the average power results of the measurement.

Response: <NR2> +-double

Returned values: <Power>

Example: READ:POW:AVER?

READ:LTE:MEAS1:POW:AVER?

READ[:<SYSTEMNAME>][:MEAS<i>]:POWer:PEAK?

Description: Starts a new measurement and retrieves the peak power results of the measurement.

Response: <NR2>

Returned values: <Power>

Example: READ:POW:PEAK?

READ:UMTS:MEAS1:POW:PEAK?

READ[:<SYSTEMNAME>][:MEAS<i>]:PVTime?

Description: Starts a new measurement and retrieves the power vs. time value.

Response: <NR1>

Example: READ:PVT?

READ:LTE:MEAS1:PVT?

READ[:<SYSTEMNAME>][:MEAS<i>]:SFLatness?

Description: Starts a new measurement and retrieves the spectral flatness value.

Response: <NR1>

Example: READ:SFL?

READ:LTE:MEAS1:SFL?

READ[:<SYSTEMNAME>][:MEAS<i>]:SMASk?

Description: Starts a new measurement and retrieves the spectral mask value.

Response: <NR1>

Example: READ:SMAS?

READ:LTE:MEAS1:SMAS?

READ[:<SYSTEMNAME>][:MEAS<i>]:SMASk:FREQuency?

Description: Starts a new measurement and retrieves the frequency of the spectral mask.

Response: <NR2> + double

Returned values: <freq>

Example: READ:SMAS:FREQ?

READ:LTE:MEAS1:SMAS:FREQ?

READ[:<SYSTEMNAME>][:MEAS<i>]:SMASk:LEVel?

Description: Starts a new measurement and retrieves the level of the spectral mask.

Response: <NR2> ± double

Returned values: <level>

Example: READ:SMAS:LEV?

READ:LTE:MEAS1:SMAS:LEV?

READ[:<SYSTEMNAME>][:MEAS<i>]:SMASk:STATus?

Description: Starts a new measurement and retrieves the status of the spectral mask.

Response: <CRD>

Returned values: PASS | FAIL

Example: READ:SMAS:STAT?

READ:LTE:MEAS1:SMAS:STAT?

READ[:<SYSTEMNAME>][:MEAS<i>]:SPECtrum?

Description: Starts a new measurement and retrieves the spectrum value.

Response: <NR1>

Example: READ:SPEC?

READ:LTE:MEAS1:SPEC?

FETCh commands

The FETCh command retrieves the measurements taken by the INITiate command and places them in the device's output buffer.

The FETCh? query returns data any time that the last reading is valid. Data becomes invalid under the following conditions:

- When *RST is executed.
- When an INITiate is executed.
- When there is any reconfiguration of signal routing, measurement function, signal generation and/or trigger blocks.
- When the sensor begins acquisition of a new reading.

FETCh
[:<SYSTEMNAME>]
(alias FETCh:<FWA>)
[:MEASurement<i>]
:ACP|:ACPR|:ACLR?
:CHANnel?
:LEVel?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:POWer?
:CCDF?
:CDE?<SCARrier>
:CDP?<SCARrier>
:CONStellation?
:CPVTime?
:EVSYmbol?
:FREQuency
:PEAK?
:MACCuracy
(alias MODulation)
:EVM
:PEAK?
:RMS?
:FERRor?
:OBW?
:LOWer?
:UPPer?
:POWer
:AVERage?
:PEAK?
:PVTime?

:SFLatness?
:SMASk?
:FREQuency?
:LEVel?
:STATus?
:SPECtrum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR?

Description: Starts a new measurement and retrieves the value of adjacent channel power, or adjacent channel power ratio, or adjacent channel leakage ratio.

Response: <NR1>

Returned values: <ACP | ACPR | ACLR>

Example: READ:ACP|:ACPR|:ACLR?

READ:WLAN:MEAS1:ACP|:ACPR|:ACLR?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:CHANnel?

Description: Queries the channel of adjacent channel power

Response: <NRf>

Returned values: <Channel>

Example: FETC:ACP|:ACPR|:ACLR:CHAN?

FETC:WLAN:MEAS1:ACP|:ACPR|:ACLR:CHAN?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:LEVel :CENTer?

Description: Queries the center level of adjacent channel power.

Response: <NRf>

Returned values: <Level>

Example: FETC:ACP|:ACPR|:ACLR:LEV:CENT?

FETC:CDMA:MEAS1:ACP|:ACPR|:ACLR:LEV:CENT?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:LEVel :LOWer?

Description: Queries the lower level of adjacent channel power.

Parameters: Instance <NR1>

Response: <NR2>

Returned values: <Level>

Example: FETC:ACP|:ACPR|:ACLR:LEV:LOW?

FETC:CDMA:MEAS1:ACP|:ACPR|:ACLR:LEV:LOW?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:LEVel :UPPer?

Description: Queries the upper level of adjacent channel power.

Parameters: Instance <NR1>

Response: <NR2>

Returned values: <Level>

Example: FETC:ACP|:ACPR|:ACLR:LEV:UPP?

FETC:CDMA:MEAS1:ACP|:ACPR|:ACLR:LEV:UPP?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:OFFSet :CENTer?

Description: Queries the center offset of adjacent channel power.

Response: <NRf>

Returned values: <Offset>

Example: FETC:ACP|:ACPR|:ACLR:OFFS:CENT?

FETC:CDMA:MEAS1:ACP|:ACPR|:ACLR:OFFS:CENT?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:OFFSet :LOWer?

Description: Queries the lower offset of Adjacent channel power.

Parameters: Instance <NR1>

Response: <NR2>

Returned values: <Offset>

Example: FETC:ACP|:ACPR|:ACLR:OFFS:LOW?

FETC:CDMA:MEAS1:ACP|:ACPR|:ACLR:OFFS:LOW?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:OFFSet :UPPer?

Description: Queries the upper offset of adjacent channel power.

Parameters: Instance <NR1>

Response: <NRf>

Returned values: <Offset>

Example: FETC:ACP|:ACPR|:ACLR:OFFS:UPP?

FETC:CDMA:MEAS1:ACP|:ACPR|:ACLR:OFFS:UPP?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:ACP|:ACPR|:ACLR:POWer?

Description: Queries the adjacent channel power.

Response: <NRf>

Returned values: <Power>

Example: FETC:ACP|:ACPR|:ACLR:POW?

FETC:WLAN:MEAS1:ACP|:ACPR|:ACLR:POW?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:CCDF?

Description: Queries the complementary cumulative distribution function value.

Response: <NR1>

Example: FETC:CCDF?

FETC:LTE:MEAS1:CCDF?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:CDE?

Description: Queries the code domain error value for a given subcarrier.

Response: <NR1>

Example: FETC:CDE?<SCARrier>

FETC:LTE:MEAS1:CDE?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:CDP?

Description: Queries the code domain power value for a given subcarrier.

Response: <NR1>

Example: FETC:CDP?<SCARrier>

FETC:LTE:MEAS1:CDP?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:CONStellation?

Description: Queries the constellation value.

Response: <NR1>

Example: FETC:CONS?

FETC:LTE:MEAS1:CONS?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:CPVTime?

Description: Queries the captured power vs. time value.

Response: <NR1>

Example: FETC:CPVT?

FETC:LTE:MEAS1:CPVTime?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:EVSYmbol?

Description: Queries the EVM vs. symbol value.

Response: <NR1>

Example: FETC:EVSY?

FETC:LTE:MEAS1:EVSY?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:FREQuency:PEAK?

Description: Queries the peak frequency of the measurement.

Response: <NRf>

Returned values: <Frequency>

Example: FETC:FREQ:PEAK?

FETC:ANAL:MEAS1:FREQ:PEAK?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:MACCuracy:EVM:PEAK?

Description: Queries the error vector magnitude peak of modulation accuracy.

Response: <NRf>

Returned values: <EPEAk>

Example: FETC:MACC:EVM:PEAK?

FETC:UMTS:MEAS1:MACC:EVM:PEAK?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:MACCuracy:EVM:RMS?

Description: Queries the error vector magnitude RMS of modulation accuracy.

Response: <NRf>

Returned values: <ERMS>

Example: FETC:MACC:EVM:RMS?

FETC:UMTS:MEAS1:MACC:EVM:RMS?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:MACCuracy:FERRor?

Description: Queries the frequency error of modulation accuracy.

Response: <NRf>

Returned values: <Freq>

Example: FETC:MACC:FERR?

FETC:UMTS:MEAS1:MACC:FERR?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:OBW?

Description: Queries the occupied bandwidth.

Response: <NRf>

Returned values: <Bandwidth>

Example: FETC:OBW?

FETC:LTE:MEAS1:OBW?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:OBW:LOWer?

Description: Queries the lower level of occupied bandwidth.

Response: <NRf>

Returned values: <Bandwidth>

Example: FETC:OBW:LOW?

FETC:LTE:MEAS1:OBW:LOW?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:OBW:UPPer?

Description: Queries the upper level of occupied bandwidth.

Response: <NRf>

Returned values: <Bandwidth>

Example: FETC:OBW:UPP?

FETC:LTE:MEAS1:OBW:UPP?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:POWer:AVERage?

Description: Queries the average power results of the measurement.

Response: <NR2>

Returned values: <Power>

Example: FETC:POW:AVER?

FETC:LTE:MEAS1:POW:AVER?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:POWer:PEAK?

Description: Queries the peak power results of the measurement.

Response: <NRf>

Returned values: <Power >

Example: FETC:POW:PEAK?

FETC:UMTS:MEAS1:POW:PEAK?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:PVTime?

Description: Queries the power vs. time value.

Response: <NR1>

Example: FETC:PVT?

FETC:LTE:MEAS1:PVT?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:SFLatness?

Description: Queries the spectral flatness value.

Response: <NR1>

Example: FETC:SFL?

FETC:LTE:MEAS1:SFL?

READ[:<SYSTEMNAME>][:MEAS<i>]:SMASk?

Description: Starts a new measurement and retrieves the spectral mask value.

Response: <NR1>

Example: READ:SMAS?

READ:LTE:MEAS1:SMAS?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:SMASk:FREQuency?

Description: Queries the frequency of the spectral mask.

Response: <NRf>

Returned values: <freq>

Example: FETC:SMAS:FREQ?

FETC:LTE:MEAS1:SMAS:FREQ?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:SMASk:LEVel?

Description: Queries the level of the spectral mask.

Response: <NRf>

Returned values: <level>

Example: FETC:SMAS:LEV?

FETC:LTE:MEAS1:SMAS:LEV?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:SMASk:STATus?

Description: Queries the status of the spectral mask.

Response: <CRD>

Returned values: PASS|FAIL

Example: FETC:SMAS:STAT?

FETC:LTE:MEAS1:SMAS:STAT?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:SPECtrum?

Description: Queries the spectrum value.

Response: <NR1>

Example: FETC:SPEC?

FETC:LTE:MEAS1:SPEC?

CONFigure commands

This command sets up the instrument in order to perform the measurement specified by the function.

CONFigure
[:<SYSTEMNAME>]
:MEASurement<i>
:ATTenuation
:ENABled
:FREQuency
:CENTer
[:CW|:FIXed]
:STARt
:STOP
:LEVel
:MODE

CONFigure[:<SYSTEMNAME>]:MEAS<i>:ATTenuation

Description: Sets the RF attenuation. When the level mode is set to Auto, the control cannot be used but it indicates the current attenuation value.

Parameters: <NR1> dB (± int)

Example: CONF:MEAS1:ATT 4 dB

CONF:LTE:MEAS1:ATT 4 dB

CONFigure[:<SYSTEMNAME>]:MEAS<i>:ENABled

Description: Enables or disables particular measurements as specified by MEASID.

Parameters: <MEASID><Boolean>

Valid units: <PVT | CDE | ACP | SPEC | CDE | CPVT | SMAS | SFL | CCDF | EVSY | CONS>,<ON | OFF>

Example: CONF:MEAS1:ENAB PVT ON

CONF:LTE:MEAS1:ENAB CDE OFF

CONFigure[:<SYSTEMNAME>]:MEAS<i>:FREQuency:CENTer

Description: Modifies the current RF center frequency of the measurement.

Parameters: <NR2> (def 2000.0000 MHz) (250000 Hz to 6.0000 GHz)

Valid units: GHz | MHz | kHz | Hz

Example: CONF:MEAS1:FREQ:CENT 2000.000000 MHz

CONF:LTE:MEAS1:FREQ:CENT 2000.000000 MHz

CONFigure[:<SYSTEMNAME>]:MEAS<i>:FREQuency:[:CW|:FIXed]

Description: Sets the continuous wave, alias FIXed frequency

Parameters: <NR2>

Valid units: GHz | MHz | kHz | Hz

Example: CONF:MEAS1:FREQ 2000.000000 MHz

CONF:LTE:MEAS1:FREQ:CW 15 MHz

CONF:LTE:MEAS1:FREQ:FIX 200.0 KHz

CONFigure[:<SYSTEMNAME>]:MEAS<i>:FREQuency:STARt

Description: Sets the start frequency of the measurement.

Parameters: <NR2>

Valid units: GHz | MHz | kHz | Hz

Example: CONF:MEAS1:FREQ:STAR 2000.000000 MHz

CONF:LTE:MEAS1:FREQ:STAR 2000.000000 MHz

CONFigure[:<SYSTEMNAME>]:MEAS<i>:FREQuency:STOP

Description: Sets the stop frequency of the measurement.

Parameters: <NR2>

Valid units: GHz | MHz | kHz | Hz

Example: CONF:MEAS1:FREQ:STOP 2000.000000 MHz

CONF:LTE:MEAS1:FREQ:STOP 2000.000000 MHz

CONFigure[:<SYSTEMNAME>]:MEAS<i>:LEVel

Description: Modifies the current input level of the measurement.

Parameters: <NR2> dBm (-90.00 dBm to 30.00 dBm)

Example: CONF:MEAS1:LEV 3.00 dBm

CONF:UMTS:MEAS1:LEV 3.00 dBm

CONFigure[:<SYSTEMNAME>]:MEAS<i>:MODE

Description: Specifies the input level setting mode.

Parameters: <CPD>

Valid values: AUTO | MANual

Example: CONF:MEAS1:MODE AUTO

CONF:GSM:MEAS1:MODE AUTO

TRIGger commands

The trigger subsystem is used to synchronize device action(s) with events. A device action might be the acquisition of a measurement or the application of a stimulus.

TRIGger
[:SEQuence]
[:<SYSTEMNAME>]
[:<INSTRUMENT><i>]
(alias:MEAS<i>|GEN<i>)
:BURSt
(alias:VIDeo)
:LEVel
:POLarity
(alias:SSIGnal[:POLarity])
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:BURSt :LEVel

Description: Sets the power level of the trigger.

Parameters: <NR1> Samples (-140.00 dBm to 120.00 dBm)

Example: TRIG:BURS:LEV 1

TRIG:SEQ:WLAN:GEN1:BURS:LEV 2

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:BURSt :POLarity

Description: Sets the triggering polarity.

Parameters: <Boolean>

Valid values: POSitive | NEGative

Example: TRIG:BURS:POL POS

TRIG:SEQ:UMTS:MEAS1:BURS:POL NEG

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:COUNt

Description: Sets the statistical count for the trigger.

Parameters: <NR1>

Valid values: Positive int 2-1000

Example: TRIG:COUN 100

TRIG:SEQ:LTED:MEAS1:COUN 100

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:DELay

Description: Sets the number of samples between when a trigger is received and when the capture is started.

Parameters: <NR1> Samples (-10.00000 s to 10.00000 s) double

Example: TRIG:DEL 100

TRIG:SEQ:EVDO:MEAS2:DEL 20

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:SOURce :EXTernal

Description: Sets the source of the external trigger.

Parameters: <CPD>

Valid values: INTTrigger<0-7>

EXTTrigger<0-1>

Example: TRIG:SOUR:EXT INTT0

TRIG:SEQ:LTE:MEAS2:SOUR:EXT INTT3

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:SOURce :IMMediate

Description: Sets the type of the trigger to Immediate.

Parameters: None

Example: TRIG:SOUR:IMM

TRIG:SEQ:UMTS:GEN1:SOUR:IMM

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:SOURce :POLarity

Description: Sets the triggering polarity.

Parameters: <Boolean> ??? Enum

Valid values: POSitive | NEGative

Example: TRIG:SOUR:POL POS

TRIG:SEQ:GSM:MEAS1:SOUR:POL NEG

TRIGger[:SEQuence][:<SYSTEMNAME>][:INSTRUMENT<i>]:TYPE

Description: Sets the type of the trigger.

Parameters: <CPD>

Valid values: IMMediate | EXTernal | BURSt

Example: TRI:TYPE BURS

TRIG:SEQ:TYPE IMM

TRIG:SEQ:LTE:GEN1:TYPE BURS

TRIG:SEQ:LTE:MEAS1:TYPE EXT

SYSTem commands

The SYSTem subsystem collects the functions that are not related to instrument performance. Examples include functions for performing general housekeeping and functions related to setting global configurations.

```
SYSTem
    :COMMunicate
        :ETHernet
            :ADDRess\?
            :AUTO\?
            :HNAMe\?
        :GPIB
            [:SELF]
                :ADDRess\?
                :ENABle
        :REMote\?
    :ERRor
        :ALL?
        :CODE?
            :ALL?
            [:NEXT]?
        :COUNt?
        [:NEXT]?
    :HELP
        :HEADers?
    :KLOCk\?
    :PON
        :MEMory\?
        :TYPE\?
    :PRESet
        :BASE
        :ALL
    :SETTings
        :FULL
            :CLEar
                :ALL
            :RECall
            :SAVE
```

SYSTem:COMMunicate:ETHernet:ADDRess

Description: Sets the instrument's Ethernet address. This command is rejected with a 'settings conflict' if DHCP is enabled.

Parameters: <string parameter data>,<string parameter data>

Valid values: NetMask and IP address, both in dotted quad format (for example, 255.255.255.0)

*RST sets No effect

Example: SYST:COMM:ETH:ADDR 255.255.255.0,10.113.10.38

SYSTem:COMMunicate:ETHernet:ADDRess?

Description: Returns the current NetMask and IP address in use, even if DHCP is enabled.

Parameters: None

Response: <string>,<string>

Returned values: Current NetMask and IP addresses

Example: SYST:COMM:ETH:ADDR?

SYSTem:COMMunicate:ETHernet:AUTO

Description: Enables or disables the use of DHCP to set network parameters.

Parameters: <Boolean>

Valid values: ON | OFF | 1 | 0

*RST sets No effect

Example: SYST:COMM:ETH:AUTO ON

SYSTem:COMMunicate:ETHernet:AUTO?

Description: Returns the DHCP state.

Parameters: None

Response: <Boolean>

Returned values: 1 | 0

Example: SYST:COMM:ETH:AUTO?

SYSTem:COMMunicate:ETHernet:HNAMe

Description: Sets the host name that appears in DHCP server logs

Parameters: <string parameter data>

Valid values: Host name

*RST sets No effect

Example: SYST:COMM:ETH:HNAM HOSTNAME

SYSTem:COMMunicate:ETHernet:HNAMe?

Description: Returns the instrument's host name.

Parameters: None

Response: <string>

Returned values: Host name

Example: SYST:COMM:ETH:HNAM?

SYSTem:COMMunicate:GPIB[:SELF]:ADDRess

Description: Sets the instrument's GPIB address.

This command is only carried out once the EOM at the end of the message has been received and all outstanding query responses have been read.

Parameters: <numeric_value>

Valid values: Valid GPIB address

*RST sets No effect on the GPIB address set

Example: SYST:COMM:GPIB:ADDR 10

SYST:COMM:GPIB:SELF:ADDR 10

SYSTem:COMMunicate:GPIB[:SELF]:ADDRess?

Description: Returns the instrument's GPIB address.

Parameters: None

Response: <NR1>

Returned values: Integer

Example: SYST:COMM:GPIB:ADDR?

SYSTem:COMMunicate:REMote

Description: Selects the remote operation interface.

This command is only carried out once the EOM at the end of the message has been received and all outstanding query responses have been read.

Parameters: <CPD>

Valid values: GPIB | ETHernet

*RST sets No effect

Example: SYST:COMM:REM GPIB

SYSTem:COMMunicate:REMote?

Description: Returns the remote operation interface that the instrument uses.

Parameters: None

Response: <CRD>

Returned values: GPIB | ETH

Example: SYST:COMM:REM?

SYSTem:ERRor:ALL?

Description: Queries the error queue for all unread items, and removes them from the queue.

Parameters: None

Response: <NR1>,<CRD>

Returns a comma-separated list of number, string pairs in FIFO order. If the queue is empty, the response is 0, ‘No error’.

Example: SYST:ERR:ALL?

SYSTem:ERRor:CODE:ALL?

Description: Queries the error queue for all unread items, and removes them from the queue.

Parameters: None

Response: <NR1>,...,<NR1>

Returns a comma-separated list of only the error/event code numbers in FIFO order. If the queue is empty, the response is 0.

Example: SYST:ERR:CODE:ALL?

SYSTem:ERRor:CODE[:NEXT]?

Description: Queries the error queue for the next item, and removes it from the queue.

Parameters: None

Response: <NR1>

Returns the error code only, as an integer. If the queue is empty, the response is 0.

Example: SYST:ERR:CODE?

SYST:ERR:CODE:NEXT?

SYSTem ERRor:COUNt?

Description: Queries the error queue for the number of unread items.

Parameters: None

Response: <NR1>

If the queue is empty, the response is 0.

Example: SYST:ERR:COUN?

SYSTem:ERRor[:NEXT]?

Description: Queries the error queue for the next unread item, and removes it from the queue.

Parameters: None

Response: <NR1>,<CRD>

Returns a number and string. If the queue is empty, the response is 0, 'No error'.

Example: SYST:ERR?

SYST:ERR:NEXT?

SYSTem:HELP:HEADers?

Description: Returns a list of the instrument command headers.

Parameters: None

Response: <arbitrary block response data>

Example: SYST:HELP:HEAD?

SYSTem:KLOCk

Description: Locks and unlocks the keyboard. When the keyboard is locked, the RPP Reset 0 soft box and the [LOCAL] key still function.

Parameters: <Boolean>

Valid values: ON | OFF | 1 | 0

*RST sets OFF

Example: SYST:KLOC 1

SYSTem:KLOCk?

Description: Queries whether the keyboard is locked (1) or unlocked (0).

Parameters: None

Response: <Boolean>

Returned values: 0 | 1

Example: SYST:KLOC?

SYSTem:PON:MEMory

Description: Specifies a user-defined power-on memory store number.

Parameters: <numeric_value>

Valid values: Valid store number.

*RST sets No effect on the store number set.

Example: SYST:PON:MEM 2000

SYSTem:PON:MEMory?

Description: Returns the power-on memory number.

Parameters: None

Response: <NR1>

Returned values: Store number.

Example: SYST:PON:MEM?

SYSTem:PON:TYPE

Description: Selects power-on either from the default memory location (factory-preset) or one specified by:SYSTem:PON:MEMory above.

Parameters: <CPD>

Valid values: DEFault | MEMory

*RST sets No effect on the language set.

Example: SYST:PON:TYPE DEF

SYSTem:PON:TYPE?

Description: Queries whether the instrument powers up from the default memory location or one specified by:SYSTem:PON:MEMory above.

Parameters: None

Response: <CRD>

Returned values: DEF | MEM

Example: SYST:PON:TYPE?

SYSTem:PRESet

Description: Returns the instrument to its default state.

Parameters: None

Example: SYST:PRES

SYSTem:SETTings:FULL:CLEar:ALL

Description: Clears all user-defined memory locations.

Parameters: None

Example: SYST:SETT:FULL:CLE:ALL

SYSTem:SETTings:FULL:RECall

Description: Recalls the contents of the specified memory location.

Parameters: <numeric_value>

Valid values: Valid store number | UP | DOWN

Example: SYST:SETT:FULL:REC UP

SYSTem:SETTings:FULL:SAVE

Description: Save the current configuration to the memory location.

Parameters: <numeric_value>

Valid values: Valid store number

Example: SYST:SETT:FULL:SAVE

STATus commands

This subsystem controls the SCPI-defined status-reporting structures. SCPI defines (in addition to those in *IEEE 488.2*) QUEStionable, OPERation, Instrument SUMmary and INSTrument registers. These registers conform to the *IEEE 488.2* specification and each may consist of a condition register, an event register, an enable register, and negative and positive transition filters.

STATus
- **<StatReg>**
  - **:CONDition?**
  - **:ENABle\?**
  - **:EVENt?**
  - **:NTRansition\?**
  - **:PTRansition\?**
- **:PRESet**

where <StatReg> is:
- **:OPERation**
- **:OPERation:TRIGger**
- **:QUEStionable**
- **:QUEStionable:FREQuency**
- **:QUEStionable:MODulation**
- **:QUEStionable:MODulation:AM**
- **:QUEStionable:MODulation:FM**
- **:QUEStionable:MODulation:IQ**
- **:QUEStionable:POWer**

STATus:<StatReg>:CONDition?

Description: Reads the contents of the status register.

Parameters: None

Response: <NR1> Status register contents

Example: STAT:OPER:COND?

STAT:QUES:COND?

STATus:<StatReg>:ENABle

Description: Sets the enable mask, which allows true conditions in the status event register to be reported in the summary bit. If a bit is '1' in the enable register and its associated event bit makes a transition to true, a positive transition occurs in the associated summary bit.

Parameters: <NRf> Mask

Valid values: 0−7FFF

Example: STAT:OPER:ENAB 2000

STAT:QUES:ENAB 1536

STATus:<StatReg>:ENABle?

Description: Reads the enable mask for the status register.

Parameters: [<NRf>][Mask]

Response: <NR1> Mask

Valid values: 0−7FFFH

Example: STAT:OPER:ENAB?

STATus:<StatReg>:EVENt?

Description: Reads the contents of the event register associated with the operation status register.

Parameters: None.

Response: <NR1> Event register contents

Valid values: 0−7FFFH

Example: STAT:OPER:EVEN?

STATus:<StatReg>:NTRansition

Description: Sets the negative transition filter in the status register. Setting a bit in the negative transition filter causes a 1 to 0 transition in the corresponding bit of the associated condition register, causing a '1' to be written in the associated bit of the corresponding event register.

Parameters: <NRf> Mask

Valid values: 0−7FFFH

Example: STAT:OPER:NTR 2000

STAT:QUES:NTR 2000

STATus:<StatReg>:NTRansition?

Description: Reads the negative transition mask for the status register.

Parameters: [<NRf>][Mask]

Response: <NR1> Mask

Valid values: 0−7FFFH

Example: STAT:OPER:NTR?

STATus:<StatReg>:PTRansition

Description: Sets the positive transition filter in the status register. Setting a bit in the positive transition filter causes a 0 to 1 transition in the corresponding bit of the associated condition register, causing a '1' to be written in the associated bit of the corresponding event register.

Parameters: <NRf> Mask

Valid values: 0−7FFFH

Example: STAT:OPER:PTR 2000

STAT:QUES:PTR 2000

STATus:<StatReg>:PTRansition?

Description: Reads the positive transition mask for the status register.

Parameters: [<NRf>][Mask]

Response: <NR1> Mask

Valid values: 0−7FFFH

Example: STAT:OPER:PTR?

STATus:PRESet

Description: Sets the enable registers and transition filter registers to their preset conditions.

Parameters: None

Example: STAT:PRES

TRACe commands

A TRACe or a DATA area is a named entity stored in instrument memory. TRACe | DATA areas may also be used to store other types of data, such as constant arrays for use in trace arithmetic or corrections, or displayed waveforms. Alternatively, TRACe | DATA areas may be used for equivalent scalar (single point) purposes.

READ
[:<SYSTEMNAME>]
(alias READ:<FWA>)
[:MEASurement<i>]
:TRACe
:ACP|:ACPR|:ACLR
:AVERage?<SCARrier>
[:CURRent]?<SCARrier
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:BSPectrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CCDF
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CDE
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CDP
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CONStellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

:EVSYmbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:GFVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SFLatness
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SMASk
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PSKConstellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PSKDvsymbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

Adjacent channel power results (trace)

The following commands return the adjacent channel power trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR:AVERage?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR[:CURRent]?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR:MAXimum?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR:MINimum?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR:AVERage?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR[:CURRent]?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR:MAXimum?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:ACP|:ACPR|:ACLR:MINimum?<SCARrier>

The ACP|:ACPR|:ACLR trace contains frequency (MHz) in the x axis and power (dBm) in the y axis.

Returned values: < freq1,power1>...:< freq n,power n>

Frequency range: -1000 MHz to 1000 MHz

Power range: -100 dBm to 0 dBm

Example: READ:LTE:MEAS1:TRAC:ACP|:ACPR|:ACLR?

Complementary cumulative distribution function results (trace)

The following commands return the CCDF (complementary cumulative distribution function) trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CCDF:MINimum?

The CCDF trace contains peak to average power (dB) in the x axis and probability (%) in the y axis.

Returned values: < peak to average power1, probability1>…<peak to average power n, probability n>

Peak to average power range: -20 dB to 15 dB

Probability range: 0.0001 % to 100 %

Example: READ:LTE:MEAS1:TRAC:CCDF?

Code domain error results (trace)

The following commands return the CDE (code domain error) trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE:AVERage?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE[:CURRent]?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE:MAXimum?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE:MINimum?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE:AVERage?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE[:CURRent]?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE:MAXimum?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDE:MINimum?<SCARrier>

The CDE trace contains code in the x axis and power (dBc) in the y axis for I and Q branches.

Returned values: <code1, power1>... <code n,power n>

Code range: -1000 to 1000

Power range: -100 dBc to 0 dBc

Example: READ:LTE:MEAS1:TRAC:CDE?

Code domain power results (trace)

The following commands return the CDP (code domain power) trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP:AVERage?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP[:CURRent]?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP:MAXimum?<SCARrier>

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP:MINimum?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP:AVERage?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP[:CURRent]?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP:MAXimum?<SCARrier>

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CDP:MINimum?<SCARrier>

The CDP trace contains code in the x axis and power (dBc) in the y axis for I and Q branches.

Returned values: <code1, power1>... <code n,power n>

Code range: -1000 to 1000

Power range: -100 dBc to 0 dBc

Example: READ:LTE:MEAS1:TRAC:CDP?

Constellation results (trace)

The following commands return the constellation trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CONStellation:MINimum?

The constellation trace contains I in the x axis and Q in the y axis.

Returned values: < I 1, Q 1>... < I n, Q n>

I range: -3 I to 3 I

Q range: -3 Q to 3 Q

Example: READ:LTE:MEAS1:TRAC:CONS?

Captured power vs. time measurement results (trace)

The following commands return the captured power vs.. time trace results. The results of the current, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:CPVTime:MINimum?

The power vs. time trace contains time (ms) in the x axis and power (dBm) in the y axis.

Returned values: < time1, power1>...:< time n, power n>

Time range: -1000 ms to 1000 ms

Power range: -100 dBm to 0 dBm

Example: READ:UMTS:MEAS1:TRAC:CPVT?

EVM vs. symbol results (trace)

The following commands return the EVM vs. symbol trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:EVSYmbol:MINimum?

The EVM vs. symbol trace contains symbol in the x axis and EVM (%) in the y axis.

Returned values: < symbol1, evm1>... < symbol n, evm n>

Symbol range: -1000 to 1000

EVM range: 0 % to 10 %

Example: READ:LTE:MEAS1:TRAC:EVSY?

Power vs. time measurement results (trace)

The following commands return the power vs.. time trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PVTime:MINimum?

The power vs. time trace contains time in the x axis and power (dBm) in the y axis.

Returned values: < time1,power1>...:< time n,power n>

Time range: 0 s to 1 s

Power range: -100 dBm to 0 dBm

Example: READ:LTE:MEAS1:TRAC:PVT?

Spectral mask results (trace)

The following commands return the spectral mask trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SMASk:MINimum?

The spectral mask trace contains frequency (MHz) in the x axis and power (dBm) in the y axis.

Returned values: < freq1, power1>...:< freq n, power n>

Frequency range: -1000 MHz to 1000 MHz

Power range: -100 dBm to 0 dBm

Example: READ:LTE:MEAS1:TRAC:SMAS?

Spectral flatness results (trace)

The following commands return the spectral flatness trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SFLatness:MINimum?

The spectral flatness trace contains subcarrier in the x axis and power (dB) in the y axis.

Returned values: <subcarrier1, power1 >... <subcarrier n,power n>

Subcarrier range: -1000 to 1000

Power range: -5 dB to 5 dB

Example: READ:GSM:MEAS1:TRAC:SFL?

Spectrum measurement results (trace)

The following commands return the spectrum trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:SPECtrum:MINimum?

The spectrum trace contains frequency (MHz) in the x axis and power (dBm) in the y axis

Returned values: < freq1,power1>...:< freq n,power n>

Frequency range: -1000 MHz to 1000 MHz

Power range: -100 dBm to 0 dBm

Example: READ:LTE:MEAS1:TRAC:SPEC?

OUTPut commands

The OUTPut subsystem effectively controls the switching of modulation paths within the instrument.

OUTPut
:MODulation
:AM
[:STATe]\?
:FM
[:STATe]\?
:IQ
[:STATe]\?
[:STATe]\?

OUTPut:MODulation:AM[:STATe]

Description: Turns the source feeding the AM on/off; other active modulators are not affected.

Parameters: <Boolean>

Valid values: OFF | ON | 0 | 1

Example: OUT:MOD:AM ON

OUT:MOD:AM:STAT ON

OUTPut:MODulation:AM[:STATe]?

Description: Queries the state of the amplitude modulation source.

Parameters: None

Response: <Boolean>

Returned values: 0 | 1

Example: OUT:MOD:AM?

OUT:MOD:AM:STAT?

OUTPut:MODulation:FM[:STATe]

Description: Turns the source feeding the FM on/off; other active modulators are not affected.

Parameters: <Boolean>

Valid values: OFF | ON | 0 | 1

Example: OUT:MOD:FM ON

OUT:MOD:FM:STAT ON

OUTPut:MODulation:FM[:STATe]?

Description: Queries the state of the frequency modulation source.

Parameters: None

Response: <Boolean>

Returned values: 0 | 1

Example: OUT:MOD:FM?

OUT:MOD:FM:STAT?

OUTPut:MODulation:IQ[:STATe]

Description: Turns the source feeding the IQ modulator on/off; other active modulators are not affected.

Parameters: <Boolean>

Valid values: OFF | ON | 0 | 1

Example: OUT:MOD:IQ ON

OUT:MOD:IQ:STAT ON

OUTPut:MODulation:IQ[:STATe]?

Description: Queries the state of the IQ modulation source.

Parameters: None

Response: <Boolean>

Returned values: 0 | 1

Example: OUT:MOD:IQ?

OUT:MOD:IQ:STAT?

OUTPut:MODulation[:STATe]

Description: Enables or disables all the active modulation outputs. When ON, this command causes each modulation output to adopt the state set by its relevant [SOURce][:MODulation]:<modn>:STATe command.

Parameters: <Boolean>

Valid values: OFF | ON | 0 | 1

Example: OUT:MOD ON

OUT:MOD:STAT ON

OUTPut:MODulation[:STATe]?

Description: Queries the state of the active modulation outputs.

Parameters: None

Response: <Boolean>

Returned values: 0 | 1

Example: OUT:MOD?

OUT:MOD:STAT?

ROUTe commands

The ROUTe subsystem controls the routing of input and output signals.

ROUTe
:MODE

ROUTe:MODE

Description: Sets the output mode for the RF generator signal.

Parameters: <CPD>

Valid values: SIMO | DUPint | HOPHis | HOHip | COPHis | LPB1 | LPB2

Example: ROUT:MODE SIMO

SOURce commands

The SOURce setup commands are divided into several sections. Each section or subsystem deals with controls that directly affect device-specific settings of the device, and not those related to the signal-oriented characteristics.

[SOURce]
[<SYSTEMNAME>]
[:GENerator[1]|2]
(alias: SOURce[1]|2)
:STATe\?
[:RFSettings]
:FREQuency
:CENTer\?
:LMODe
[:MODulation]
:MODE\?
[:STATe]
:POWer
[:LEVel]
:MODE\?

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2]:STATe
alias
SOURce[1]|2:STATe

Description: Turns the generator on or off.

Parameters: <CPD>

Valid values: ON | OFF | PEND

Example: STAT OFF

SOUR:GSM:GEN1:STAT ON

SOUR1:STAT ON

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2]:STATe?
alias
SOURce[1]|2:STATe?

Description: Queries the generator state.

Parameters: None

Response: <CRD>

Returned values: ON | OFF | PEND

Example: STAT?

SOUR:GSM:GEN1:STAT?

SOUR1:STAT?

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2][:RFSettings] :FREQuency:CENTer
alias
SOURce[1]|2[:RFSettings]:FREQuency:CENTer

Description: Sets the center frequency of the RF generator.

Parameters: <NR2>

Valid values: Positive

Example: FREQ:CENT 10 MHz

SOUR:UMTS:GEN1:RFS:FREQ:CENT 1000 MHz

SOUR1:FREQ:CENT 10 MHz

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2][:RFSettings] :FREQuency:CENTer?
alias
SOURce[1]|2[:RFSettings]:FREQuency:CENTer?

Description: Queries the center frequency of the RF generator.

Parameters: None

Returned values: <NR2>

Example: FREQ:CENT?

SOUR:UMTS:GEN1:RFS:FREQ:CENT ?

SOUR1:FREQ:CENT?

[SOURce][:SIGGen]:[:GENerator[1]|2][:RFSettings]:LMODe
alias
SOURce[1]|2[:RFSettings]:LMODe

Description: Sets the base level of the constant-frequency RF generator

Parameters: <CPD>

Valid values: AUTO | FROZen | PEAK | RMS

Example: LMOD AUTO

SOUR:UMTS:GEN1:LMOD RMS

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2][:RFSettings][:MODulation]:MODE
alias
SOURce[1]|2[:RFSettings][:MODulation]:MODE

Description: Sets the modulation mode.

Parameters: <CPD>

Valid values: AM | FM | IQ

Example: MODE AM

SOUR:UMTS:GEN1:RFS:MOD:MODE FM

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2][:RFSettings][:MODulation]:MODE?
alias
SOURce[1]|2[:RFSettings][:MODulation]:MODE?

Description: Returns the mode of modulation

Response: <CRD>

Returned values: CW | AM | FM | IQ

Example: MODE?

SOUR:UMTS:GEN1:RFS:MOD:MODE?

[SOURce][:<SYSTEMNAME>]:GENerator[1]|2[:RFSettings][:MODulation][:STATe]
alias
SOURce[1]|2[:RFSettings][:MODulation][:STATe]

Description: Sets the modulation state of the signal generator.

Parameters: <Boolean>

Valid values: 1 | 0 | ON | OFF

Example: GEN1 ON

SOUR:GSM:GEN1:RFS:MOD:STAT OFF

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2][:RFSettings] :POWer:LEVel
alias
SOURce[1]|2[:RFSettings]:POWer:LEVel

Description: Sets the power level of the RF generator.

Parameters: None

Returned values: <NR2>

Example: POW:LEV 10 dBm

SOUR:UMTS:GEN1:RFS:POW:LEV -0.64dBm

SOUR1:POW:LEV 10 dBm

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2][:RFSettings] :POWer:MODE
alias
SOURce[1]|2[:RFSettings]:POWer:MODE

Description: Sets the Power mode of the RF generator.

Parameters: <CPD>

Valid values: FIXed | SWEep | LIST

Example: POW:MODE FIX

SOUR:UMTS:GEN1:RFS:POW:MODE LIST

SOUR1:POW:MODE FIX

[SOURce][:<SYSTEMNAME>]:[:GENerator[1]|2][:RFSettings] :POWer:MODE?
alias
SOURce[1]|2[:RFSettings]:POWer:MODE?

Description: Queries the power mode of the RF generator.

Parameters: None

Response: <CRD>

Returned values: FIX | SWE | LIST

Example: POW:MODE?

SOUR:UMTS:GEN1:RFS:POW:MODE?

SOUR1:POW:MODE?

SPECTRUM ANALYZER COMMANDS

READ commands

READ
:ANALyser
(alias READ:<FWA>)
[:MEASurement<i>]
:ACP|:ACPR|:ACLR
:CHANnel?
:LEVel?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:POWer?
:FREQuency
:PEAK?
:OBW
:LOWer?
:UPPer?
:POWer
:AVERage?
:PEAK?
:PVTime?
:SPECtrum?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:FVTime?
:PHVTime?

READ[:<SYSTEMNAME>][:MEAS<i>]:FVTime?

Description: Starts a new measurement and retrieves the frequency vs. Time value.

Response: <NR1>

Example: READ:FVT?

READ:LTE:MEAS1:FVT?

READ[:<SYSTEMNAME>][:MEAS<i>]:PHVTime?

Description: Starts a new measurement and retrieves the phase vs. time value.

Response: <NR1>

Example: READ:PHVT?

READ:LTE:MEAS1:PHVT?

FETCh commands

FETCh
:ANALyser
(alias FETCh:<FWA>)
[:MEASurement<i>]
:ACP|:ACPR|:ACLR
:CHANnel?
:LEVel?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:POWer?
:FREQuency
:PEAK?
:OBW
:LOWer?
:PVTime?
:SPECtrum?
:UPPer?
:POWer
:AVERage?
:PEAK?

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

:FVTime?
:PHVTime?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:FVTime?

Description: Queries the frequency vs. time value.

Response: <NR1>

Example: FETC:FVT?

FETC:LTE:MEAS1:FVT?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:PHVTime?

Description: Queries the phase vs. time value.

Response: <NR1>

Example: FETC:PHVT?

FETC:LTE:MEAS1:PHVT?

CONFigure commands

CONFigure
[:ANALyser]
:MEASurement<i>
:ATTenuation
:ENABled\?
:FREQuency
:CENTer
[:CW|:FIXed]
:STARt
:STOP
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ACP
:ALPHa
:AUTO
:SPACing
:WIDTh
:FREQuency
:USER
:CENTer?
:CHANnel
:ALPHa
:FREQuency
[:NUMBer]
:OFFSet
:MULTichannel
:ALPHa<i>
:FREQuency<i>
:OFFSet<i>
[:MODE]\?
:OFFSet
:SPECtrum
:BWIDth
:PERCentage
:RESolution
:[WIDTh]
:COUNt
:NPEak
:WTYPe
:ZSPan
:ENABle
:POINts
:TIME

CONFigure[:ANALyser]:MEAS<i>:ACP:ALPHa

Description: Sets the filter alpha for ACP

Parameters: <NR2> (Max value 1.0)

Example: CONF:MEAS1:ACP:ALPH 0.22

CONF:ANAL:MEAS1:ACP:ALPH 0.1

CONFigure[:ANALyser]:MEAS<i>:ACP:AUTO:SPACing

Description: Sets the channel spacing for ACP.

Parameters: < NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:ANAL:MEAS1:ACP:AUTO:SPAC 1.0MHz

CONF:MEAS1:ACP:AUTO:SPAC 200KHz

CONFigure[:ANALyser]:MEAS<i>:ACP:AUTO:WIDTh

Description: Sets the channel width for ACP.

Parameters: < NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:ANAL:MEAS1:ACP:MODE:AUTO:WIDT 1.0MHz

CONF:MEAS1:ACP:MODE:AUTO:WIDT 100KHz

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:CENTer?

Description: Queries the width and spacing of CENTer channel for ACP.

Response: Data <NR2> , <NR2>

Example: CONF:ANAL:MEAS1:ACP:USER:CENT?

CONF:MEAS1:ACP:USER:CENT?

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:CHANnel:ALPHa

Description: Sets the channel for ACP.

Parameters: <NR2>

Example: CONF:ANAL:MEAS1:ACP:USER:CHAN:ALPH 10

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:CHANnel:FREQuency

Description: Sets the channel frequency for ACP.

Parameters: <NR2>

Example: CONF:ANAL:MEAS1:ACP:USER:CHAN:FREQ 10

CONF:MEAS1:ACP:USER:CHAN:FREQ 22.5

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:CHANnel[:NUMBer]

Description: Sets the channel number for ACP.

Parameters: <NR1>

Example: CONF:ANAL:MEAS1:ACP:USER:CHAN[:NUMB]1

CONF:ANAL:MEAS1:ACP:USER:CHAN 1

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:CHANnel:OFFSet

Description: Sets the channel offset for ACP.

Parameters: <NR2>

Example: CONF:ANAL:MEAS1:ACP:USER:CHAN:OFFS 100

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:MULTichannel:ALPHa

Description: Sets the alpha for multiple channels for ACP.

Parameters: <NR2,NR2, NR2….>

Example: CONF:ANAL:MEAS1:ACP:USER:MULT:ALPH<100, 50, 75>

CONF:MEAS1:ACP:USER:MULT:ALPH<100, 50, 75>

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:MULTichannel :FREQuency

Description: Sets the frequency for multiple channels for ACP.

Parameters: <NR2,NR2, NR2….>

Example: CONF:ANAL:MEAS1:ACP:USER:MULT:FREQ<20, 50, 10.2>

CONF:MEAS1:ACP:USER:MULT:FREQ<20, 50, 10.2>

CONFigure[:ANALyser]:MEAS<i>:ACP:USER:MULTichannel:OFFSet

Description: Sets the offset for multiple channels for ACP.

Parameters: <NR2,NR2, NR2….>

Example: CONF:ANAL:MEAS1:ACP:USER:MULT:OFFS<10, 50, 15.22>

CONF:MEAS1:ACP:USER:MULT:OFFS<10, 50, 15.22>

CONFigure[:ANALyser]:MEAS<i>:ACP[:MODE]

Description: Sets the ACP mode.

Parameters: <CPD>

Valid values: AUTO | USER

Example: CONF:MEAS1:ACP USER

CONF:ANAL:MEAS1:ACP[:MODE] AUTO

CONFigure[:ANALyser]:MEAS<i>:ACP:OFFSet

Description: Sets the CENTer frequency offset for ACP

Parameters: < NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:MEAS1:ACP:OFFS 10MHz

CONF:ANAL:MEAS1:ACP:OFFS 500KHz

CONFigure[:ANALyser]:MEAS<i>:SPECtrum:BWIDth:PERCentage

Description: Sets the percentage for the occupied bandwidth.

Parameters: <NR2> %

Valid values: 0 to 100 %

Example: CONF:ANAL:MEAS1:SPEC:BWID:PERC 10%

CONF:MEAS1:SPEC:BWID:PERC 90%

CONFigure[:ANALyser]:MEAS<i>:SPECtrum:BWIDth:RESolution

Description: Sets the bandwidth resolution.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:ANAL:MEAS1:SPEC:BWID:RES 15KHz

CONF:MEAS1:SPEC:BWID:RES 150KHz

CONFigure[:ANALyser]:MEAS<i>:SPECtrum:BWIDth[:WIDTh]

Description: Sets the width for occupied bandwidth.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:ANAL:MEAS1:SPEC:BWID:WIDT 100 MHz

CONF:MEAS1:SPEC:BWID 100 MHz

CONFigure[:ANALyser]:MEAS<i>:SPECtrum:COUNt

Description: Sets the number of iterations/averages for spectrum configuration.

Parameters: <NR1>

Example: CONF:ANAL:MEAS1:SPEC:COUN 10

CONF:MEAS1:SPEC:COUN 10

CONFigure[:ANALyser]:MEAS<i>:SPECtrum:NPEak

Description: Sets the number of peaks in the spectrum.

Parameters: <NR1>

Example: CONF:ANAL:MEAS1:SPEC:NPE 10

CONF:MEAS1:SPEC:NPE 10

CONFigure[:ANALyser]:MEAS<i>:SPECtrum:WTYPe

Description: Sets the window type for the spectrum.

Parameters: <CPD>

Valid values: GNOise | G3DB | BHARris

Example: CONF:ANAL:MEAS1:SPEC:WTYP GNO

CONF:MEAS1:SPEC:WTYP G3DB

CONFigure[:ANALyser]:MEAS<i>:ZSPan:ENABle

Description: Sets the points enable/disable for zero span.

Parameters: <Boolean>

Valid values: 1 | 0

Example: CONF:ANAL:MEAS1:ZSP:ENAB 1

CONF:MEAS1:ZSP:ENAB 0

CONFigure[:ANALyser]:MEAS<i>:ZSPan:POINts

Description: Sets the points for zero span.

Parameters: <NR1>

Valid values: Positive

Example: CONF:ANAL:MEAS1:ZSP:POIN 500

CONF:MEAS1:ZSP:POIN 100

CONFigure[:ANALyser]:MEAS<i>:ZSPan:TIME

Description: Sets the zero span time.

Parameters: <NR2>

Valid units: s | ms | us | ns

Example: CONF:MEAS1:ZSP:TIME 100ms

CONF:ANAL:MEAS1:ZSP:TIME 50s

TRACe commands

READ
[:ANALyser]
[:MEASurement<i>]
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:TRACe
:PVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACe commands.

:FVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PHVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

FREQUENCY vs. TIME results (TRACE)

The following commands return the Frequency vs. time trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:ANALyser][:MEAS<i>]:TRACe:FVTime:AVERage?

READ[:ANALyser][:MEAS<i>]:TRACe:FVTime[:CURRent]?

READ[:ANALyser][:MEAS<i>]:TRACe:FVTime:MAXimum?

READ[:ANALyser][:MEAS<i>]:TRACe:FVTime:MINimum?

FETCH[:ANALyser][:MEAS<i>]:TRACe:FVTime:AVERage?

FETCH[:ANALyser][:MEAS<i>]:TRACe:FVTime[:CURRent]?

FETCH[:ANALyser][:MEAS<i>]:TRACe:FVTime:MAXimum?

FETCH[:ANALyser][:MEAS<i>]:TRACe:FVTime:MINimum?

The Frequency vs. Time trace contains Time (s) in the x axis and Frequency (MHz) in the y axis.

Returned values: < time1, freq1>... < time n, freq n>

Time range: 0 s to 1000 s

Frequency range: -100 MHz to 100 MHz

Example: READ:TRAC:FVT:MIN?
FETC:ANAL:MEAS1:TRAC:FVT:MIN?

PHASE vs. TIME results (TRACE)

The following commands return the Phase Vs Time trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:ANALyser][:MEAS<i>]:TRACe:PHVTime:AVERage?

READ[:ANALyser][:MEAS<i>]:TRACe:PHVTime[:CURRent]?

READ[:ANALyser][:MEAS<i>]:TRACe:PHVTime:MAXimum?

READ[:ANALyser][:MEAS<i>]:TRACe:PHVTime:MINimum?

FETCH[:ANALyser][:MEAS<i>]:TRACe:PHVTime:AVERage?

FETCH[:ANALyser][:MEAS<i>]:TRACe:PHVTime[:CURRent]?

FETCH[:ANALyser][:MEAS<i>]:TRACe:PHVTime:MAXimum?

FETCH[:ANALyser][:MEAS<i>]:TRACe:PHVTime:MINimum?

The Phase vs. Time trace contains Time (s) in the x axis and Phase (rad) in the y axis.

Returned values: < time1, phase1>, ..., < time n, phase n>

Time range: 0 s to 0.0099984 s

Phase range: -4 radian to 4 radian

Example: READ:TRAC:PHVT:AVE?
FETC:ANAL:MEAS1:TRAC:PHVT:MAX?

TRIGger commands

TRIGger
:LTEuplink
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

Spectrum stubbed commands

1 CONFigure[:ANALyser]:MEAS<i>:SPECtrum:COUNt\?

2 CONFigure[:ANALyser]:MEAS<i>:SPECtrum:BWIDth:RESolution\?

3 TRIGGering:ANALyser:COUNT\?

4 READ:ANAL:PVT?

5 FETC:ANAL:PVT?

6 READ:ANAL:SPEC?

7 FETC:ANAL:SPEC?

8 READ:ANAL:PHVT?

9 FETC:ANAL:PHVT?

10 READ:ANAL:ACP:OFFS:UPP?

11 FETC:ANAL:ACP:OFFS:UPP?

12 READ:ANAL:ACP:OFFS:LOW?

13 FETC:ANAL:ACP:OFFS:LOW?

14 READ:ANAL:ACP:LEV:UPP?

15 FETC:ANAL:ACP:LEV:UPP?

16 READ:ANAL:ACP:LEV:LOW?

17 FETC:ANAL:ACP:LEV:LOW?

18 READ:ANAL:ACP:LEV:CENT?

19 FETC:ANAL:ACP:LEV:CENT?

20 READ:ANAL:ACP:CHAN?

21 FETC:ANAL:ACP:CHAN?

22 READ:ANAL:ACP?

23 FETC:ANAL:ACP?

24 CONF:ANAL:FREQ:STAR\?

25 CONF:ALAN:FREQ:STOP\?

26 CONF:Anal:Acp:User:Mult:Offs\?

27 CONF:Anal:Acp:User:Mult:Alph\?

28 CONFigure[:ANALyser]:MEAS<i>:ACP:USER:CENTer\?

LTE FDD UPLINK COMMANDS

This section describes commands applicable for 7000 LTE FDD Uplink Plugin.

READ commands

READ
:LTEuplink
[:MEASurement<i>]
:ACLR
:OFFSet?<j>
:POWer?<j>
:WIDTh?<j>
:BWIDth
:LOWer?
:UPPer?
:POWer
:AVERage?
:SMASk?
:FREQuency?
:LEVel?
:STATus?

For the definition/behavior of the above commands, refer to the generic section READ commands.

The following are LTE FDD UPLINK commands:

:CONStellation
:NACarrier?
:EVCarrier?
:EVM
:RMS?
:DMRS?
:IQERror
:GIMBalance?
:OOFFset?
:SKEW?
:MACCuracy
:SCERror?
:PVRB?
:PVSLot?
:SFLatness?
:ALL?
:LOWer?
:SLOT?
:UPPer?

READ:LTEuplink[:MEAS<i>]:EVCarrier?

Description: Starts a new measurement and retrieves the EVM vs. carrier value.

Response: <NR1>

Example: READ:LTE:EVC?

READ:LTE:MEAS1:EVC?

READ:LTEuplink[:MEAS<i>]:MACCuracy:EVM:DMRS?

Description: Starts a new measurement and retrieves the error vector magnitude DMRS of the modulation accuracy.

Response: <NR2> % double

Returned values: <DMRS>

Example: READ:LTE:MACC:DMRS?

READ:LTE:MEAS1:MACC:DMRS?

READ:LTEuplink[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Starts a new measurement and retrieves the IQ gain imbalance of the modulation accuracy.

Response: <NR2> dB ± double

Returned values: <IQG>

Example: READ:LTE:MACC:IQER:GIMB?

READ:LTE:MEAS1:MACC:IQER:GIMB?

READ:LTEuplink[:MEAS<i>]:MACCuracy:IQERror:OOFFset?

Description: Starts a new measurement and retrieves the IQ origin offset of the modulation accuracy.

Response: <NR2> dB ± double

Returned values: <OOFF>

Example: READ:LTE:MACC:IQER:OOFF?

READ:LTE:MEAS1:MACC:IQER:OOFF?

READ:LTEuplink[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Starts a new measurement and retrieves the IQ skew of the modulation accuracy.

Response: <NR2> (degree) double

Returned values: <SKEW>

Example: READ:LTE:MACC:IQER:SKEW?

READ:LTE:MEAS1:MACC:IQER:SKEW?

READ:LTEuplink[:MEAS<i>]:MACCuracy:SCERror?

Description: Starts a new measurement and retrieves the symbol clock error of the modulation accuracy.

Response: <NR2> ppm ± double

Returned values: <SCER>

Example: READ:LTE:MACC:SCER?

READ:LTE:MEAS1:MACC:SCER?

READ:LTEuplink[:MEAS<i>]:PVRB?

Description: Starts a new measurement and retrieves the power vs. resource block measurement.

Response: <NR1>

Example: READ:LTE:PVRB?

READ:LTE:MEAS1:PVRB?

READ:LTEuplink[:MEAS<i>]:PVSLot?

Description: Starts a new measurement and retrieves the power vs.. slot measurement.

Response: <NR1>

Example: READ:LTE:PVSL?

READ:LTE:MEAS1:PVSL?

READ:LTEuplink[:MEAS<i>]:SFLatness?

Description: Starts a new measurement and retrieves the spectral flatness.

Response: <TBD>

Returned values: <TBD>

Example: READ:LTE:SFL?

READ:LTE:MEAS1:SFL?

READ:LTEuplink[:MEAS<i>]:SFLatness:ALL?

Description: Starts a new measurement and retrieves the overall spectrum flatness measurement.

Response: <TBD>

Example: READ:LTE:SFL:ALL?

READ:LTE:MEAS1:SFL:ALL?

READ:LTEuplink[:MEAS<i>]:SFLatness:LOWer?

Description: Starts a new measurement and retrieves the lower spectrum flatness measurement.

Response: <TBD>

Example: READ:LTE:SFL:LOW?

READ:LTE:MEAS1:SFL:LOW?

READ:LTEuplink[:MEAS<i>]:SFLatness:SLOT?

Description: Starts a new measurement and retrieves the slot measurement of the spectrum flatness.

Response: <NR1>

Example: READ:LTE:SFL:SLOT?

READ:LTE:MEAS1:SFL:SLOT?

READ:LTEuplink[:MEAS<i>]:SFLatness:UPPer?

Description: Starts a new measurement and retrieves the upper spectrum flatness measurement.

Response: <TBD>

Example: READ:LTE:SFL:UPP?

READ:LTE:MEAS1:SFL:UPP?

FETCh commands

FETCh
:LTEuplink
[:MEASurement<i>]
:ACLR
:OFFSet?<j>
:POWer?<j>
:WIDTh?<j>
:BWIDth
:LOWer?
:UPPer?
:CCDF?
:CPVTime?
:EVSYmbol?
:POWer
:AVERage?
:SMASk?
:FREQuency?
:LEVel?
:STATus?
:SPECtrum?

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

The following are LTE FDD UPLINK commands:

:CONStellation?
:NACarrier?
:EVCarrier?
:MACCuracy
:EVM
:DMRS?
:RMS? **:IQERror**
:GIMBalance\?
:OOFFset\?
:SKEW\?
:SCERror?
:SFLatness?
:ALL?
:LOWer?
:SLOT?
:UPPer?
:PVRB?
:PVSLot?

FETCh:LTEuplink[:MEAS<i>]:CONStellation:NACarrier?

Description: Queries the non-allocated carriers of the modulation accuracy.

Response: <NR1>

Returned values: <NAC>

Example: FETC:LTE:MACC:NAC?

FETC:LTE:MEAS1:MACC:NAC?

FETCh:LTEuplink[:MEAS<i>]:EVCarrier?

Description: Queries the EVM vs. carrier value.

Response: <NR1>

Example: FETC:LTE:EVC?

FETC:LTE:MEAS1:EVC?

FETCh:LTEuplink[:MEAS<i>]:MACCuracy:EVM:DMRS?

Description: Queries the error vector magnitude DMRS of the modulation accuracy.

Response: <NR2>%

Returned values: <DMRS>

Example: FETC:LTE:MACC:DMRS?

FETC:LTE:MEAS1:MACC:DMRS?

FETCh:LTEuplink[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Queries the IQ gain imbalance of the modulation accuracy.

Response: <NR2>dB

Returned values: <IQG>

Example: FETC:LTE:MACC:IQER:GIMB?

FETC:LTE:MEAS1:MACC:IQER:GIMB?

FETCh:LTEuplink[:MEAS<i>]:MACCuracy:IQERror:OOFFset?

Description: Queries the IQ origin offset of the modulation accuracy.

Response: <NR2>dB

Returned values: <OOFF>

Example: FETC:LTE:MACC:IQER:OOFF?

FETC:LTE:MEAS1:MACC:IQER:OOFF?

FETCh:LTEuplink[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Queries the IQ skew of the modulation accuracy.

Response: <NR2>(degree)

Returned values: <SKEW>

Example: FETC:LTE:MACC:IQER:SKEW?

FETC:LTE:MEAS1:MACC:IQER:SKEW?

FETCh:LTEuplink[:MEAS<i>]:MACCuracy:SCERror?

Description: Queries the symbol clock error of the modulation accuracy.

Response: <NR2>ppm

Returned values: <SCER>

Example: FETC:LTE:MACC:SCER?

FETC:LTE:MEAS1:MACC:SCER?

FETCh:LTEuplink[:MEAS<i>]:PVRB?

Description: Queries the power vs.. resource block measurement.

Response: <NR1>

Example: FETC:LTE:PVRB?

FETC:LTE:MEAS1:PVRB?

FETCh:LTEuplink[:MEAS<i>]:PVSLot?

Description: Queries the power vs. slot measurement.

Response: <NR1>

Example: FETC:LTE:PVSL?

FETC:LTE:MEAS1:PVSL?

FETCh:LTEuplink[:MEAS<i>]:SFLatness?

Description: Queries and retrieves the spectral flatness.

Response: <TBD>

Returned values: <TBD>

Example: FETC:LTE:SFL?

FETC:LTE:MEAS1:SFL?

FETCh:LTEuplink[:MEAS<i>]:SFLatness:ALL?

Description: Queries the overall spectrum flatness measurement.

Response: <TBD>

Returned values: <TBD>

Example: FETC:LTE:SFL:ALL?

FETC:LTE:MEAS1:SFL:ALL?

FETCh:LTEuplink[:MEAS<i>]:SFLatness:LOWer?

Description: Queries the lower spectrum flatness measurement.

Response: <TBD>

Returned values: <TBD>

Example: FETC:LTE:SFL:LOW?

FETC:LTE:MEAS1:SFL:LOW?

FETCh:LTEuplink[:MEAS<i>]:SFLatness:SLOT?

Description: Queries the slot measurement of the spectrum flatness.

Response: <TBD>

Returned values: <TBD>

Example: FETC:LTE:SFL:SLOT?

FETC:LTE:MEAS1:SFL:SLOT?

FETCh:LTEuplink[:MEAS<i>]:SFLatness:UPPer?

Description: Queries the upper spectrum flatness measurement.

Response: <TBD>

Returned values: <TBD>

Example: FETC:LTE:SFL:UPP?

FETC:LTE:MEAS1:SFL:UPP?

CONFigure commands

CONFigure
:LTEuplink
:MEASurement<i>
:ATTenuation
:ENABled
:FREQuency
:CENTer
[:CW|:FIXed]
:STARt
:STOP
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ACLR
:ALPHa\?<i>
:BWIDth<i>\?
:MEASured\?<i>
[:CHANnel]
:COUNt
:OFFset\?<i>
:TYPe\?<i>
:ANALysis
:BWIDth
:EVMWindow
:LENGth
:MODE
:SMASk
[:MODE]
:FREQuency
:BAND
:SLOT
[:DETect]
:COUNt?
:MODE\?
:STARt\?
:DMRS\?<i>
:MODulation\?<i>
:RB
:COUNt<i>\?
:OFFSet<i>\?
:TYPe?<i>

:SYSTEM
- **:BWIDth** — **:CELLid**
- **:CYCLic**
  - **[:PREFix]**
- **:DMRS**
- **:HSS**
- **:TRAcking**
  - **:AMPLitude**
  - **:PHASe**
  - **:TIME**

CONFigure:LTEuplink:MEAS<i>:ACLR:ALPHa

Description: Sets the alpha of ACLR configuration if the user channel is selected.

Parameters: <NR2>

Valid values: 0.00 to 1.0

Example: CONF:LTE:MEAS1:ACLR:ALPH 0.99

CONFigure:LTEuplink:MEAS<i>:ACLR:BWIDth

Description: Sets the bandwidth of the ACLR configuration.

Parameters: <NR2> MHz

Valid values: 1.4 | 3.0 | 5.0 | 10.0 | 15.0 | 20.0 MHz

Example: CONF:LTE:MEAS1:ACLR:BW 10.0 MHz

CONFigure:LTEuplink:MEAS<i>:ACLR:BWIDth:MEASured

Description: Sets the measured bandwidth of the ACLR configuration.

Parameters: <NR2> 1 Hz to 50.00 MHz

Valid units: KHz | Hz | MHz | GHz

Example: CONF:LTE:MEAS1:ACLR:BWID:MEAS 1.000000 MHZ

CONFigure:LTEuplink:MEAS<i>:ACLR:COUNt

Description: Sets the number of channels of the ACLR configuration.

Parameters: <NR1>

Valid values: 1 to 15

Example: CONF:LTE:MEAS1:ACLR:COUN 10

CONFigure:LTEuplink:MEAS<i>:ACLR:OFFSet

Description: Sets the frequency offset of the ACLR configuration.

Parameters: <NR2>+- 99.00000 GHz to 999999 GHz <double>

Valid units: KHz | Hz | MHz | GHz

Example: CONF:LTE:MEAS1:ACLR:OFFS 1.200000 MHz

CONFigure:LTEuplink:MEAS<i>:ACLR:TYPE

Description: Sets the channel type of the ACLR configuration.

Parameters: <CPD>

Valid values: LTE | UMTS | USER

Example: CONF:LTE:MEAS1:ACLR:TYPE LTE

CONFigure:LTEuplink:MEAS<i>:ANALysis:BWIDth

Description: Sets the bandwidth of the LTE system configuration.

Parameters: <NR2>MHz

Valid values: 1.4 | 3.0 | 5.0 | 10.0 | 15.0 | 20.0 MHz

Example: CONF:LTE:MEAS1:ANAL:BWID 3.0 MHz

CONFigure:LTEuplink:MEAS<i>:ANALysis:EVMWindow

Description: Sets the EVM window position of the LTE system configuration.

Parameters: <CPD>

Valid values: LOW | MIDDle | HIGH

Example: CONF:LTE:MEAS1:ANAL:EVMW LOW

CONFigure:LTEuplink:MEAS<i>:ANALysis:LENGth

Description: Sets the search length of the LTE system configuration.

Parameters: <NR2>

Valid values: Positive (maximum 0.25 sec)

Valid units: s | us | ms | ns

Example: CONF:LTE:MEAS1:ANAL:LENG 2000.000 us

CONFigure:LTEuplink:MEAS<i>:ANALysis:MODE

Description: Sets the analysis mode of the LTE system configuration.

Parameters: <CPD>

Valid values: RANDom | SPECific

Example: CONF:LTE:MEAS1:ANAL:MODE SPEC

CONFigure:LTEuplink:MEAS<i>:ANALysis:SMASk[:MODE]

Description: Sets the mode of the spectrum mask of the LTE system configuration.

Parameters: <CPD>

Valid values: GENeral | NS_03 | NS_04 | NS_06

Example: CONF:LTE:MEAS1:ANAL:SMAS:MODE NS_04

CONFigure:LTEuplink:MEAS<i>:FREQuency:BAND

Description: Sets the operating band of the LTE system configuration.

Parameters: <NR1>

Valid values: 1 to 40

Example: CONF:LTE:MEAS1:FREQ:BAND 35

CONFigure:LTEuplink:MEAS<i>:SLOT:DETect:COUNt

Description: Sets the number of slots to analyze in the slot configuration.

Parameters: <NR1>

Valid values: 1 to 20

Example: CONF:LTE:MEAS1:SLOT:DET:COUN 10

CONFigure:LTEuplink:MEAS<i>:SLOT:DETect:MODE

Description: Sets the detection mode of the slot configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTE:MEAS1:SLOT:DET:MODE AUTO

CONFigure:LTEuplink:MEAS<i>:SLOT:DETect:STARt

Description: Sets the number of the start slot in the slot configuration.

Parameters: <NR1>

Valid values: 1 to 20

Example: CONF:LTE:MEAS1:SLOT:DET:STAR 10

CONFigure:LTEuplink:MEAS<i>:SLOT:DMRS

Description: Sets the n(2) DMRS of the slot configuration.

Parameters: <NR1>

Valid values: 0 | 2 | 3 | 4 | 6 | 8 | 9 | 10

Example: CONF:LTE:MEAS1:SLOT:DMRS 6

CONFigure:LTEuplink:MEAS<i>:SLOT:MODulation

Description: Sets the modulation type of the slot configuration.

Parameters: <CPD>

Valid values: QPSK | 16 QAM | 64 QAM

Example: CONF:LTE:MEAS1:SLOT:MOD 16 QAM

CONFigure:LTEuplink:MEAS<i>:SLOT:RB:COUNt

Description: Gets the RB count of the slot configuration.

Parameters: <NR1>

Valid values: Positive (25)

Example: CONF:LTE:MEAS1:SLOT:RB:COUN 20

CONFigure:LTEuplink:MEAS<i>:SLOT:SINDex:RB:OFFSet

Description: Sets the RB offset of the slot configuration.

Parameters: <NR1>

Valid values: Positive

Example: CONF:LTE:MEAS1:SLOT:SIND:RB:OFFS 10

CONFigure:LTEuplink:MEAS<i>:SLOT:TYPE?

Description: Queries the channel type of the slot configuration.

Parameters: None

Response: <CRD>

Example: CONF:LTE:MEAS1:SLOT:TYPE?

CONFigure:LTEuplink:MEAS<i>:SYSTem:CELLid

Description: Sets the cell ID of the LTE system configuration.

Parameters: <NR1>

Valid values: 0 to 503

Example: CONF:LTE:MEAS1:SYST:CELL 200

CONFigure:LTEuplink:MEAS<i>:SYSTem:CYCLic[:PREFix]

Description: Sets the cyclic prefix of the LTE system configuration.

Parameters: <CPD>

Valid values: NORMal | EXTended

Example: CONF:LTE:MEAS1:SYST:CYCL EXT

CONF:LTE:MEAS1:SYST:CYCL:PREF NORM

CONFigure:LTEuplink:MEAS<i>:SYSTem:DMRS

Description: Sets the PUSCH DMRS of the LTE system configuration.

Parameters: <NR1>

Valid values: 0 to 29

Example: CONF:LTE:MEAS1:SYST:DMRS 20

CONFigure:LTEuplink:MEAS<i>:SYSTem:HSS

Description: Sets the half subcarrier shift of the LTE system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTE:MEAS1:SYST:HSS ON

CONFigure:LTEuplink:MEAS<i>:SYSTem:TRAcking:AMPLitude

Description: Sets the pilot amplitude tracking of the LTE system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTE:MEAS1:SYST:TRA:AMPL ON

CONFigure:LTEuplink:MEAS<i>:SYSTem:TRAcking:PHASe

Description: Sets the pilot phase tracking of the LTE system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTE:MEAS1:SYST:TRA:PHAS OFF

CONFigure:LTEuplink:MEAS<i>:SYSTem:TRAcking:TIME

Description: Sets the pilot time tracking of the LTE system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTE:MEAS1:SYST:TRA:TIME OFF

TRACe commands

READ
:LTEuplink
[:MEASurement<i>]
:TRACe
:CCDF
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CONStellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:EVSYmbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SFLatness
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SMASk
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:CXNacarrier
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

:EVCarrier
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PVRB
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PVSLot
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

Constellation (excluding non allocated carriers) results (trace)

The following commands return the constellation (excluding non allocated carriers) trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier:AVERage?

READ:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier[:CURRent]?

READ:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier:MAXimum?

READ:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier:MINimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier:AVERage?

FETCh:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier[:CURRent]?

FETCh:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier:MAXimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:CXNacarrier:MINimum?

This trace contains I in the x axis and Q in the y axis.

Returned values: < I 1, Q 1>... <I n, Q n>

I range: -3 I to 3 I

Q range: -3 Q to 3 Q

Example: READ:LTE:MEAS1:TRAC:CXN?

EVM vs. carrier results (trace)

The following commands return the EVM vs. carrier trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:LTEuplink[:MEAS<i>]:TRACe:EVCarrier:AVERage?

READ:LTEuplink[:MEAS<i>]:TRACe:EVCarrier[:CURRent]?

READ:LTEuplink[:MEAS<i>]:TRACe:EVCarrier:MAXimum?

READ:LTEuplink[:MEAS<i>]:TRACe:EVCarrier:MINimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:EVCarrier:AVERage?

FETCh:LTEuplink[:MEAS<i>]:TRACe:EVCarrier[:CURRent]?

FETCh:LTEuplink[:MEAS<i>]:TRACe:EVCarrier:MAXimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:EVCarrier:MINimum?

This trace contains subcarrier in the x axis and EVM (%) in the y axis.

Returned values: < subcarrier 1, evm1>... <subcarrier n,evm n>

Subcarrier range: -1000 to 1000

EVM range: 0 % to 10 %

Example: READ:LTE:MEAS1:TRAC:EVC:AVER?

Power vs. resource block results (trace)

The following commands return the power vs. resource block trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:LTEuplink[:MEAS<i>]:TRACe:PVRB:AVERage?

READ:LTEuplink[:MEAS<i>]:TRACe:PVRB[:CURRent]?

READ:LTEuplink[:MEAS<i>]:TRACe:PVRB:MAXimum?

READ:LTEuplink[:MEAS<i>]:TRACe:PVRB:MINimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVRB:AVERage?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVRB[:CURRent]?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVRB:MAXimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVRB:MINimum?

This trace contains resource block in the x axis and power (dBm) in the y axis.

Returned values: < resourceblock 1, power 1>... < powerblock n,power n>

Resource block range: 0 to 1000

Power Range: -100 dBm to 0 dBm

Example: READ:LTE:MEAS1:TRAC:PVRB:MAX?

Power vs. slot results (trace)

The following commands return the power vs. slot trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:LTEuplink[:MEAS<i>]:TRACe:PVSLot:AVERage?

READ:LTEuplink[:MEAS<i>]:TRACe:PVSLot[:CURRent]?

READ:LTEuplink[:MEAS<i>]:TRACe:PVSLot:MAXimum?

READ:LTEuplink[:MEAS<i>]:TRACe:PVSLot:MINimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVSLot:AVERage?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVSLot[:CURRent]?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVSLot:MAXimum?

FETCh:LTEuplink[:MEAS<i>]:TRACe:PVSLot:MINimum?

This trace contains slot in the x axis and power (dBm) in the y axis.

Returned values: < slot 1,power 1>... <slot n,power n>

Slot range: 0 to 1000

Power range: -100 dBm to 0 dBm

Example: READ:LTE:MEAS1:TRAC:PVSL:MIN?

TRIGger commands

TRIGger
:LTEuplink
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

UMTS UPLINK COMMANDS

READ commands

READ
:UMTSuplink
[:MEASurement<i>]
:ACLR?
:LEVel
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet
:CENTer?
:LOWer?<j>
:UPPer?<j>
:CDE?<SCARrier>
:CDP?<SCARrier>
:CPVTime?
:MACCuracy
:EVM
:PEAK?
:RMS?
:FERRor?
:POWer
:AVERage?
:SMASk?
:FREQuency?
:LEVel?
:STATus?

For the definition/behavior of the above commands, refer to the generic section READ commands.

The following are UMTS UPLINK-specific commands:

:CCONstellation?
:DEMOd<CHANnel>
:AVAilable?
:BITS?
:BRANch?
:CODE?
:GAIN?
:LENGth?
:SFACtor?

```
:MACCuracy
    :ASNumber?
    :CDE
        :IPEak?
        :QPEak?
    :CLEak?
    :EVM
        :MERRor?
    :HTOFfset?
    :IQERror
        :GIMBalance?
        :SKEW?
    :MEPeak?
    :PERRor
        :PEAK?
        :RMS?
    :STIMing?
:POWer
        :SLOT?
:SMASk
    :OFFSet
        :FREQuency?
        :LEVel?
            :MAX?
        :REGion?
```

READ:UMTSuplink[:MEAS<i>]:CCONstellation?

Description: Starts a new measurement and retrieves the composite constellation measurement.

Response: <NR1>

Example: READ:UMTS:CCON?

READ:UMTS:MEAS1:CCON?

READ:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:AVAilable?

Description: Starts a new measurement and retrieves whether given demodulated channel is available.

Response: <Boolean>

Example: READ:UMTS:DEMO<DPCC>:AVA?

READ:UMTS:MEAS1:DEMO<DPCC>:AVA?

READ:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:BITS?

Description: Starts a new measurement and retrieves the DPCCH bits of channel information.

Response: <NR1>

Example: READ:UMTS:DEMO<EDPD>:BITS?

READ:UMTS:MEAS1:DEMO<DPCC>:BITS?

READ:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:BRANch?

Description: Starts a new measurement and retrieves the DPCCH branch of channel information.

Response: <CRD>

Returned Valued <QBRanch|IBRanch>

Example: READ:UMTS:DEMO<EDPD>:BRAN?

READ:UMTS:MEAS1:DEMO<EDPC>:BRAN?

READ:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:CODE?

Description: Starts a new measurement and retrieves the DPCCH code of channel information.

Response: <NR1>

Example: READ:UMTS:DEMO<HSDP>:CODE?

READ:UMTS:MEAS1:DEMO<EDPC>:CODE?

READ:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:GAIN?

Description: Starts a new measurement and retrieves the DPCCH gain of channel information.

Response: <NR2>dBc

Example: READ:UMTS:DEMO<DPCC>:GAIN?

READ:UMTS:MEAS1:DEMO<HSDP>:GAIN?

READ:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:SFACtor?

Description: Starts a new measurement and retrieves the DPCCH spreading factor of channel information.

Response: <NR1>

Example: READ:UMTS:DEMO<DPCC>:SFAC?

READ:UMTS:MEAS1:DEMO<DPCC>:SFAC?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:ASNumber?

Description: Starts a new measurement and retrieves the analyzed slot number of the modulation accuracy.

Response: <NR1>

Example: READ:UMTS:MACC:ASN?

READ:UMTS:MEAS1:MACC:ASN?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:CDE:IPEak?

Description: Starts a new measurement and retrieves the peak code domain error (I) of the modulation accuracy.

Response: <NR2>dB

Example: READ:UMTS:MACC:CDE:IPE?

READ:UMTS:MEAS1:MACC:CDE:IPE?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:CDE:QPEak?

Description: Starts a new measurement and retrieves the peak code domain error (Q) of the modulation accuracy.

Response: <NR2>dB

Example: READ:UMTS:MACC:CDE:QPE?

READ:UMTS:MEAS1:MACC:CDE:QPE?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:CLEak?

Description: Starts a new measurement and retrieves the carrier leak of the modulation accuracy.

Response: <NR2>dB

Example: READ:UMTS:MACC:CLE?

READ:UMTS:MEAS1:MACC:CLE?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:EVM:MERRor?

Description: Starts a new measurement and retrieves the magnitude error RMS of the modulation accuracy.

Response: <NR2>dB

Example: READ:UMTS:MACC:EVM:MERR?

READ:UMTS:MEAS1:MACC:EVM:MERR?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:HTOFfset?

Description: Starts a new measurement and retrieves the HS-DPCCH timing offset of the modulation accuracy.

Response: <NR1>

Example: READ:UMTS:MACC:HTOF?

READ:UMTS:MEAS1:MACC:HTOF?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Starts a new measurement and retrieves the IQ gain imbalance of the modulation accuracy.

Response: <NR2>dB

Example: READ:UMTS:MACC:IQER:GIMB?

READ:UMTS:MEAS1:MACC:IQER:GIMB?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Starts a new measurement and retrieves the IQ skew of the modulation accuracy.

Response: <NR2> degree

Example: READ:UMTS:MACC:IQER:SKEW?

READ:UMTS:MEAS1:MACC:IQER:SKEW?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:MEPeak?

Description: Starts a new measurement and retrieves the magnitude error peak of the modulation accuracy.

Response: <NR2>dB

Example: READ:UMTS:MACC:MEP?

READ:UMTS:MEAS1:MACC:MEP?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:PERRor:PEAK?

Description: Starts a new measurement and retrieves the phase error peak of the modulation accuracy.

Response: <NR2>degree

Example: READ:UMTS:MACC:PERR:PEAK?

READ:UMTS:MEAS1:MACC:PERR:PEAK?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:PERRor:RMS?

Description: Starts a new measurement and retrieves the phase error RMS of the modulation accuracy.

Response: <NR2>degree

Example: READ:UMTS:MACC:PERR:RMS?

READ:UMTS:MEAS1:MACC:PERR:RMS?

READ:UMTSuplink[:MEAS<i>]:MACCuracy:STIMing?

Description: Starts a new measurement and retrieves the slot timing of the modulation accuracy.

Response: <NR2>ms

Example: READ:UMTS:MACC:STIM?

READ:UMTS:MEAS1:MACC:STIM?

READ:UMTSuplink[:MEAS<i>]:POWer:SLOT?

Description: Starts a new measurement and retrieves the slot power.

Response: <NR2>dB

Example: READ:UMTS:POW:SLOT?

READ:UMTS:MEAS1:POW:SLOT?

READ:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:FREQuency?

Description: Starts a new measurement and retrieves the fail frequency of spectral mask offsets.

Response: <NR2>KHz

Example: READ:UMTS:SAMS:OFFS:FREQ?

READ:UMTS:MEAS1:SAMS:OFFS:FREQ?

READ:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:LEVel?

Description: Starts a new measurement and retrieves the fail level of spectral mask offsets.

Response: <NR2>dB

Example: READ:UMTS:SAMS:OFFS:LEV?

READ:UMTS:MEAS1:SAMS:OFFS:LEV?

READ:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:LEVel:MAX?

Description: Starts a new measurement and retrieves the maximum fail level of spectral mask offsets.

Response: <NR2>dBc

Example: READ:UMTS:SAMS:OFFS:LEV:MAX?

READ:UMTS:MEAS1:SAMS:OFFS:LEV:MAX?

READ:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:REGion?

Description: Starts a new measurement and retrieves the region of spectral mask offsets.

Response: <NR1>

Example: READ:UMTS:SAMS:OFFS:REG?

READ:UMTS:MEAS1:SAMS:OFFS:REG?

FETCh commands

```
FETCh
    :UMTSuplink
        [:MEASurement<i>]
            :ACLR?
                :LEVel
                    :CENTer?
                    :LOWer?<j>
                    :UPPer?<j>
                :OFFSet
                    :CENTer?
                    :LOWer?<j>
                    :UPPer?<j>
            :CDE?
            :CDP?
            :CPVTime?
            :MACCuracy
                :EVM
                    :PEAK?
                    :RMS?
                :FERRor?
            :POWer
                :AVERage?
            :SMASk?
                :LEVel?
                :FREQuency?
                :STATus?
```

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

The following are UMTS UPLINK-specific commands:

:CCONstellation?
:DEMOd<CHANnel>
:AVAilable?
:BITS?
:BRANch?
:CODE?
:GAIN?
:LENGth?
:SFACtor?
:MACCuracy
:ASNumber?
:CLEak?
:CDE
:IPEak?
:QPEak?
:EVM
:MERRor?
:HTOFfset?
:IQERror
:GIMBalance?
:SKEW?
:MEPeak?
:PERRor
:PEAK?
:RMS?
:STIMing?
:POWer
:SLOT?
:SMASk
:OFFSet
:FREQuency?
:LEVel?
:MAX?
:REGion?

FETCh:UMTSuplink[:MEAS<i>]:CCONstellation?

Description: Queries the composite constellation measurement.

Response: <NR1>

Example: FETC:UMTS:CCON?

FETC:UMTS:MEAS1:CCON?

FETCh:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:AVAilable?

Description: Queries whether the given demodulated channel is available.

Response: <Boolean>

Example: FETC:UMTS:DEMO<DPCC>:AVA?

FETC:UMTS:MEAS1:DEMO<DPCC>:AVA?

FETCh:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:BITS?

Description: Queries the DPCCH bits of the channel information.

Response: <NR1>

Example: FETC:UMTS:DEMO<EDPD>:BITS?

FETC:UMTS:MEAS1:DEMO<DPCC>:BITS?

FETCh:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:BRANch?

Description: Queries the DPCCH branch of the channel information.

Response: <CRD>

Returned Valued <QBRanch|IBRanch>

Example: FETC:UMTS:DEMO<EDPD>:BRAN?

FETC:UMTS:MEAS1:DEMO<EDPC>:BRAN?

FETCh:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:CODE?

Description: Queries the DPCCH code of the channel information.

Response: <NR1>

Example: FETC:UMTS:DEMO<HSDP>:CODE?

FETC:UMTS:MEAS1:DEMO<EDPC>:CODE?

FETCh:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:GAIN?

Description: Queries the DPCCH gain of the channel information.

Response: <NR2>dBc

Example: FETC:UMTS:DEMO<DPCC>:GAIN?

FETC:UMTS:MEAS1:DEMO<HSDP>:GAIN?

FETCh:UMTSuplink[:MEAS<i>]:DEMOd<CHANnel>:SFACtor?

Description: Queries the DPCCH spreading factor of the channel information.

Response: <NR1>

Example: FETC:UMTS:DEMO<DPCC>:SFAC?

FETC:UMTS:MEAS1:DEMO<DPCC>:SFAC?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:ASNumber?

Description: Queries the analyzed slot number of the modulation accuracy.

Response: <NR1>

Example: FETC:UMTS:MACC:ASN?

FETC:UMTS:MEAS1:MACC:ASN?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:CLEak?

Description: Queries the carrier leak of the modulation accuracy.

Response: <NR2>dB

Example: FETC:UMTS:MACC:CLE?

FETC:UMTS:MEAS1:MACC:CLE?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:CDE:IPEak?

Description: Queries the peak code domain error (I) of the modulation accuracy.

Response: <NR2>dB

Example: FETC:UMTS:MACC:CDE:IPE?

FETC:UMTS:MEAS1:MACC:CDE:IPE?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:CDE:QPEak?

Description: Queries the peak code domain error (Q) of the modulation accuracy.

Response: <NR2>dB

Example: FETC:UMTS:MACC:CDE:QPE?

FETC:UMTS:MEAS1:MACC:CDE:QPE?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:EVM:MERRor?

Description: Queries the magnitude error RMS of the modulation accuracy.

Response: <NR2>dB

Example: FETC:UMTS:MACC:EVM:MERR?

FETC:UMTS:MEAS1:MACC:EVM:MERR?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:HTOFfset?

Description: Queries the HSDPCCH timing offset of the modulation accuracy.

Response: <NR1>

Example: FETC:UMTS:MACC:HTOF?

FETC:UMTS:MEAS1:MACC:HTOF?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Queries the IQ gain imbalance of the modulation accuracy.

Response: <NR2>dB

Example: FETC:UMTS:MACC:IQER:GIMB?

FETC:UMTS:MEAS1:MACC:IQER:GIMB?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Queries the IQ skew of the modulation accuracy.

Response: <NR2> degree

Example: FETC:UMTS:MACC:IQER:SKEW?

FETC:UMTS:MEAS1:MACC:IQER:SKEW?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:MEPeak?

Description: Queries the magnitude error peak of the modulation accuracy.

Parameters: None

Response: <NR2>dB

Example: FETC:UMTS:MACC:MEP?

FETC:UMTS:MEAS1:MACC:MEP?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:PERRor:PEAK?

Description: Queries the phase error peak of the modulation accuracy.

Response: <NR2>degree

Example: FETC:UMTS:MACC:PERR:PEAK?

FETC:UMTS:MEAS1:MACC:PERR:PEAK?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:PERRor:RMS?

Description: Queries the phase error RMS of the modulation accuracy.

Response: <NR2>degree

Example: FETC:UMTS:MACC:PERR:RMS?

FETC:UMTS:MEAS1:MACC:PERR:RMS?

FETCh:UMTSuplink[:MEAS<i>]:MACCuracy:STIMing?

Description: Queries the slot timing of the modulation accuracy.

Response: <NR2>ms

Example: FETC:UMTS:MACC:STIM?

FETC:UMTS:MEAS1:MACC:STIM?

FETCh:UMTSuplink[:MEAS<i>]:POWer:SLOT?

Description: Queries the slot power.

Response: <NR2>dB

Example: FETC:UMTS:POW:SLOT?

FETC:UMTS:MEAS1:POW:SLOT?

FETCh:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:FREQuency?

Description: Queries the fail frequency of spectral mask offsets.

Response: <NR2>KHz

Example: FETC:UMTS:SMAS:OFFS:FREQ?

FETC:UMTS:MEAS1:SMAS:OFFS:FREQ?

FETCh:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:LEVel?

Description: Queries the fail level of spectral mask offsets.

Response: <NR2>dB

Example: FETC:UMTS:SMAS:OFFS:LEV?

FETC:UMTS:MEAS1:SMAS:OFFS:LEV?

FETCh:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:LEVel:MAX?

Description: Queries the maximum fail level of spectral mask offsets.

Response: <NR2>dBc

Example: FETC:UMTS:SMAS:OFFS:LEV:MAX?

FETC:UMTS:MEAS1:SMAS:OFFS:LEV:MAX?

FETCh:UMTSuplink[:MEAS<i>]:SMASk:OFFSet:REGion?

Description: Queries the region of spectral mask offsets.

Response: <NR1>

Example: FETC:UMTS:SMAS:OFFS:REG?

FETC:UMTS:MEAS1:SMAS:OFFS:REG?

CONFigure commands

CONFigure
:UMTSuplink
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
[:CW|:FIXed]
:STARt
:STOP
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ACLR
:COUNt
:FREQuency<i>
[:ANALysis]
:CHANnel
[:DETect]
:MODE
:THReshold
:LENGth
:PILot
:MODE\?
:SLOT\?
:COUNt\?
:PERiod\?
:STARt\?
:SMASk
:AUTO\?
:TYPE\?
:CHANnel
:BAND?
:BRANch<cpd>
:CODE<cpd>
:SFACtor<cpd>
:STATus<cpd>
:SYSTEM
:SCODe
:SLOT
:FORMat

CONFigure:UMTSuplink:MEAS<i>:ACLR:COUNt

Description: Sets the frequency count of the UMTS uplink ACLR configuration.

Parameters: <NR1>

Valid values: 1 | 3 | 5

Example: CONF:UMTS:MEAS1:ACLR:COUN 1

CONFigure:UMTSuplink:MEAS<i>:ACLR:FREQuency

Description: Sets the frequency offset of the UMTS uplink ACLR configuration.

Parameters: <NR2>

Valid units: KHz | MHz | GHz

Example: CONF:UMTS:MEAS1:ACLR:FREQ 1

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:CHANnel[:DETect]:MODE

Description: Sets the channel detection mode of the UMTS uplink system configuration.

Parameters: <CPD>

Valid values: USER | AUTOcase1 | 2 | 3

Example: CONF:UMTS:MEAS1:CHAN:MODE AUTO

CONF:UMTS:MEAS1:ANAL:CHAN:DET:MODE USER

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:CHANnel:THReshold

Description: Sets the channel threshold of the UMTS uplink measurement configuration.

Parameters: <NR2>dB

Valid values: -60.00 dB to 60.00 dB

Example: CONF:UMTS:MEAS1:ANAL:CHAN:THR 60.00 dB

CONF:UMTS:MEAS1:CHAN:THR 60.00 dB

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:LENGth

Description: Sets the search length of the UMTS uplink measurement configuration.

Parameters: <NR2>

Valid values: 0 s to 0.250000000 s

Valid units: ns | us | ms | s

Example: CONF:UMTS:MEAS1:ANAL:LENG 2000.000 us

CONFigure:UMTSuplink:MEAS<i>:[:ANALysis]:LENGth:PILot

Description: Sets the pilot search length of the UMTS uplink system configuration.

Parameters: <NR1>

Valid values: 0 to 5

Example: CONF:UMTS:MEAS1:ANAL:LENG:PIL 3

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:MODE

Description: Sets the analysis mode of the UMTS uplink measurement configuration.

Parameters: <CPD>

Valid values: RANDom | SPECific

Example: CONF:UMTS:MEAS1:ANAL:MODE RAND

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:SLOT

Description: Sets the slot of the UMTS uplink measurement configuration.

Parameters: <NR1>

Valid values: 0 to 14

Example: CONF:UMTS:MEAS1:ANAL:SLOT 1

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:SLOT:COUNt

Description: Sets the number of slots of the UMTS uplink system configuration.

Parameters: <NR1>

Valid values: 0 to 15

Example: CONF:UMTS:MEAS1:ANAL:SLOT:COUN 13

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:SLOT:PERiod

Description: Sets the slot power transient period of the UMTS uplink measurement configuration.

Parameters: <NR2>

Valid values: 0 us to 10.000000 us

Valid units: us

Example: CONF:UMTS:MEAS1:ANAL:SLOT:PER 5.0000 us

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:SLOT:STARt

Description: Sets the starts slot of the UMTS uplink system configuration.

Parameters: <NR1>

Valid values: 0 to 14

Example: CONF:UMTS:MEAS1:ANAL:SLOT:STAR 3

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:SMASk:AUTO

Description: Sets the auto spectral mask of the UMTS uplink measurement configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:UMTS:MEAS1:ANAL:SMAS:AUTO OFF

CONFigure:UMTSuplink:MEAS<i>[:ANALysis]:SMASk:TYPE

Description: Sets the auto spectral mask type of the UMTS uplink measurement configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:UMTS:MEAS1:ANAL:SMAS TYPE OFF

CONFigure:UMTSuplink:MEAS<i>:CHANnel

Description: Sets the channel of the UMTS RF configuration.

Parameters: <NR1>

Example: CONF:UMTS:MEAS1:CHAN 1100

CONF:UMTS:MEAS1:CHAN 1100

CONFigure:UMTSuplink:MEAS<i>:CHANnel:BAND?

Description: Queries the band of the UMTS RF configuration.

Parameters: None

Response: <CRD>

Example: CONF:UMTS:MEAS1:CHAN:BAND?

CONF:UMTS:MEAS1:CHAN:BAND?

CONFigure:UMTSuplink:MEAS<i>:CHANnel:BRANch<CHANnel>

Description: Sets the branch for the DPCCH channel of the UMTS uplink.

Parameters: <CPD> DPCCh|DPDCh<i>|HSDP|EDPC|EDPD

Valid values: I | Q

Example: CONF:UMTS:MEAS1:CHAN:BRAN<EDPD> Q

CONFigure:UMTSuplink:MEAS<i>:CHANnel:CODE<CHANnel>

Description: Sets the code for a given channel of the UMTS uplink.

Parameters: <CPD> DPCCh|DPDCh<i>|HSDP|EDPC|EDPD

Valid values: to 255

Example: CONF:UMTS:MEAS1:CHAN:CODE<HSPD> 255

CONFigure:UMTSuplink:MEAS<i>:CHANnel:SFACtor<CHANnel>

Description: Sets the spreading factor for the DPCCH channel of the UMTS uplink.

Parameters: <CPD> DPCCh|DPDCh<i>|HSDP|EDPC|EDPD

Valid values: 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256

Example: CONF:UMTS:MEAS1:CHAN:SFAC<EDPC> 16

CONFigure:UMTSuplink:MEAS<i>:CHANnel:STATus<CHANnel>

Description: Sets the status of given channel of the UMTS uplink.

Parameters: <CPD> DPCCh|DPDCh<i>|HSDP|EDPC|EDPD

Valid values: DISable | ENABle

Example: CONF:UMTS:MEAS1:CHAN:STAT<DPCC> DIS

CONFigure:UMTSuplink:MEAS<i>:SYSTem:SCODe

Description: Sets the scrambling code of the UMTS uplink system configuration.

Parameters: <NR1>

Valid values: 0 to 10000

Example: CONF:UMTS:MEAS1:SYST:SCOD 500

CONFigure:UMTSuplink:MEAS<i>:SYSTEM:SLOT:FORMat

Description: Sets the slot format of the UMTS uplink system configuration.

Parameters: <NR1>

Valid values: 0 to 4

Example: CONF:UMTS:MEAS1:SYST:SLOT:FORM 2

TRACe commands

READ
:UMTSuplink
[:MEASurement<i>]
:ACLR
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CDE
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CDP
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SMASk
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:TRACe

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:CCONstellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

Composite constellation results (trace)

The following commands return the composite constellation trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation:AVERage?

READ:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation[:CURRent]?

READ:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation:MAXimum?

READ:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation:MINimum?

FETCh:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation:AVERage?

FETCh:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation [:CURRent]?

FETCh:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation:MAXimum?

FETCh:UMTSuplink[:MEAS<i>]:TRACe:CCONstellation:MINimum?

This trace contains I in the x axis and Q in the y axis.

Returned values: < I 1, Q 1>... <I n, Q n>

I range: -3 I to 3 I

Q range: -3 Q to 3 Q

Example: READ:UMTS:MEAS1:TRAC:CCON?

TRIGger commands

TRIGger
:UMTSuplink
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

GSM COMMANDS

READ commands

READ
:GSM
[:MEASurement<i>]
:MACCuracy
:EVM
:PEAK?
:RMS?
:FERRor?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:BER?
:ERRor **:BITS?**
:RATE?
:SPEech
:EFRames?
:FER?
:TOTal
:BITS?
:ERRor?
:FRAMes?
:BURSt
:DTSC?
:DTYPe?
:FPOWer?
:POWer?
:TERRor?
:EDGE
:DROop?
:EVM
:NFPercentile?
:PEAK?
:RMS?
:OOSuppression?

```
:POWer
    :PROFile
        :COMPlete
            :FAIL
                :LEVel?
                :TIMe?
            [:STATus]?
        :FALLing
            :FAIL
                :LEVel?
                :TIMe?
            [:STATus]?
        :RISing
            :FAIL
                :LEVel?
                :TIMe?
            [:STATus]?
        :USEFul
            :FAIL
                :LEVel?
                :TIMe?
            [:STATus]?
```

READ:GSM[:MEAS<i>]:BER?

Description: Starts a new measurement and retrieves the error rate of BER.

Response: <NR2> %

Example: READ:GSM:BER?

READ:GSM:MEAS1:BER?

READ:GSM[:MEAS<i>]:BER:SPEech:EFRames?

Description: Starts a new measurement and retrieves the speech erased frames of BER.

Response: <NR1>

Example: READ:GSM:BER:SPE:EFR?

READ:GSM:MEAS1:BER:SPE:EFR?

READ:GSM[:MEAS<i>]:BER:SPEech:FER?

Description: Starts a new measurement and retrieves the speech frame erasure rate of BER.

Response: <NR2> %

Example: READ:GSM:BER:SPE:FER?

READ:GSM:MEAS1:BER:SPE:FER?

READ:GSM[:MEAS<i>]:BER:TOTal:BITS?

Description: Starts a new measurement and retrieves the total bits of BER.

Response: <TBD>

Example: READ:GSM:BER:TOT:BITS?

READ:GSM:MEAS1:BER:TOT:BITS?

READ:GSM[:MEAS<i>]:BER:TOTal:ERRor?

Description: Starts a new measurement and retrieves the bits in error of BER.

Response: <NR1>

Example: READ:GSM:BER:TOT:ERR?

READ:GSM:MEAS1:BER:TOT:ERR?

READ:GSM[:MEAS<i>]:BER:TOTal:FRAMes?

Description: Starts a new measurement and retrieves the total frames of BER.

Response: <NR1>

Example: READ:GSM:BER:TOT:FRAM?

READ:GSM:MEAS1:BER:TOT:FRAM?

READ:GSM[:MEAS<i>]:BURSt:DTSC?

Description: Starts a new measurement and retrieves the detected TSC of the burst.

Response: <NR1>

Example: READ:GSM:BURS:DTSC?

READ:GSM:MEAS1:BURS:DTSC?

READ:GSM[:MEAS<i>]:BURSt:DTYPe?

Description: Starts a new measurement and retrieves the detected burst type.

Response: <CRD>

Example: READ:GSM:BURS:DTYP?

READ:GSM:MEAS1:BURS:DTYP?

READ:GSM[:MEAS<i>]:BURSt:FPOWer?

Description: Starts a new measurement and retrieves the fast burst power.

Response: <NR2> dBm

Example: READ:GSM:BURS:FPOW?

READ:GSM:MEAS1:BURS:FPOW?

READ:GSM[:MEAS<i>]:BURSt:POWer?

Description: Starts a new measurement and retrieves the burst power.

Response: <NR2> dBm

Example: READ:GSM:BURS:POW?

READ:GSM:MEAS1:BURS:POW?

READ:GSM[:MEAS<i>]:BURSt:TERRor?

Description: Starts a new measurement and retrieves the burst timing error.

Parameters: None

Response: <NR1>

Example: READ:GSM:BURS:TERR?

READ:GSM:MEAS1:BURS:TERR?

READ:GSM[:MEAS<i>]:EDGE:DROop?

Description: Starts a new measurement and retrieves the droop of EDGE.

Response: <NR2>

Example: READ:GSM:EDGE:DRO?

READ:GSM:MEAS1:EDGE:DRO?

READ:GSM[:MEAS<i>]:EDGE:EVM:NFPercentile?

Description: Starts a new measurement and retrieves the 95th percentile EVM of EDGE.

Response: <NR2>

Example: READ:GSM:EDGE:EVM:NFP?

READ:GSM:MEAS1:EDGE:EVM:NFP?

READ:GSM[:MEAS<i>]:EDGE:EVM:PEAK?

Description: Starts a new measurement and retrieves the peak EVM of EDGE.

Response: <NR2>

Example: READ:GSM:EDGE:EVM:PEAK?

READ:GSM:MEAS1:EDGE:EVM:PEAK?

READ:GSM[:MEAS<i>]:EDGE:EVM:RMS?

Description: Starts a new measurement and retrieves the RMS EVM of EDGE.

Response: <NR2>

Example: READ:GSM:EDGE:EVM:RMS?

READ:GSM:MEAS1:EDGE:EVM:RMS?

READ:GSM[:MEAS<i>]:EDGE:OOSuppression?

Description: Starts a new measurement and retrieves the origin offset suppression of EDGE.

Response: <NR2>

Example: READ:GSM:EDGE:OOS?

READ:GSM:MEAS1:EDGE:OOS?

READ:GSM[:MEAS<i>]:POWer:PROFile:COMPlete:FAIL:LEVel?

Description: Starts a new measurement and retrieves the complete profile fail level of power.

Response: <NR2> dBr

Example: READ:GSM:POW:PROF:COMP:FAIL:LEV?

READ:GSM:MEAS1:POW:PROF:COMP:FAIL:LEV?

READ:GSM[:MEAS<i>]:POWer:PROFile:COMPlete:FAIL:TIME?

Description: Starts a new measurement and retrieves the complete profile fail time of power.

Response: <NR2> symbols

Example: READ:GSM:POW:PROF:COMP:FAIL:TIME?

READ:GSM:MEAS1:POW:PROF:COMP:FAIL:TIME?

READ:GSM[:MEAS<i>]:POWer:PROFile:COMPlete[:STATus]?

Description: Starts a new measurement and retrieves the complete profile status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: READ:GSM:POW:PROF:COMP?

READ:GSM:MEAS1:POW:PROF:COMP:STAT?

READ:GSM[:MEAS<i>]:POWer:PROFile:FALLing:FAIL:LEVel?

Description: Starts a new measurement and retrieves the falling profile fail level of power.

Response: <NR2> dBr

Example: READ:GSM:POW:PROF:FALL:FAIL:LEV?

READ:GSM:MEAS1:POW:PROF:FALL:FAIL:LEV?

READ:GSM[:MEAS<i>]:POWer:PROFile:FALLing:FAIL:TIME?

Description: Starts a new measurement and retrieves the falling profile fail time of power.

Response: <NR2> symbols

Example: READ:GSM:POW:PROF:FALL:FAIL:TIME?

READ:GSM:MEAS1:POW:PROF:FALL:FAIL:TIME?

READ:GSM[:MEAS<i>]:POWer:PROFile:FALLing[:STATus]?

Description: Starts a new measurement and retrieves the falling profile status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: READ:GSM:POW:PROF:FALL?

READ:GSM:MEAS1:POW:PROF:FALL:STAT?

READ:GSM[:MEAS<i>]:POWer:PROFile:RISing:FAIL:LEVel?

Description: Starts a new measurement and retrieves the rising profile fail level of power.

Response: <NR2> dBr

Example: READ:GSM:POW:PROF:RIS:FAIL:LEV?

READ:GSM:MEAS1:POW:PROF:RIS:FAIL:LEV?

READ:GSM[:MEAS<i>]:POWer:PROFile:RISing:FAIL:TIME?

Description: Starts a new measurement and retrieves the rising profile fail time of power.

Response: <NR2> symbols

Example: READ:GSM:POW:PROF:RIS:FAIL:TIME?

READ:GSM:MEAS1:POW:PROF:RIS:FAIL:TIME?

READ:GSM[:MEAS<i>]:POWer:PROFile:RISing[:STATus]?

Description: Starts a new measurement and retrieves the rising profile status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: READ:GSM:POW:PROF:RIS?

READ:GSM:MEAS1:POW:PROF:RIS:STAT?

READ:GSM[:MEAS<i>]:POWer:PROFile:USEFul:FAIL:LEVel?

Description: Starts a new measurement and retrieves the useful profile fail level of power.

Response: <NR2> dBr

Example: READ:GSM:POW:PROF:USEF:FAIL:LEV?

READ:GSM:MEAS1:POW:PROF:USEF:FAIL:LEV?

READ:GSM[:MEAS<i>]:POWer:PROFile:USEFul:FAIL:TIME?

Description: Starts a new measurement and retrieves the useful profile fail time of power.

Response: <NR2> symbols

Example: READ:GSM:POW:PROF:USEF:FAIL:TIME?

READ:GSM:MEAS1:POW:PROF:USEF:FAIL:TIME?

READ:GSM[:MEAS<i>]:POWer:PROFile:USEFul[:STATus]?

Description: Starts a new measurement and retrieves the useful profile status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: READ:GSM:POW:PROF:USEF?

READ:GSM:MEAS1:POW:PROF:USEF:STAT?

FETCh commands

FETCh
:GSM
[:MEASurement<i>]
:MACCuracy
:EVM
:PEAK?
:RMS?
:FERRor?

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

:BER?
:ERRor?
:EFRames?
:FER?
:TOTal
:BITS?
:ERRor?
:FRAMes?
:SPEech
:BURSt
:DTSC?
:DTYPe?
:FPOWer?
:POWer?
:TERRor?
:EDGE
:DROop?
:EVM
:NFP?
:PEAK?
:RMS?
:OOSuppression?
:POWer
:PROFile
:COMPlete
:FAIL
:LEVel?
:TIMe?
[:STATus]?
:FALLing
:FAIL
:LEVel?
:TIMe?
[:STATus]?

:RISing
:FAIL
:LEVel?
:TIMe?
[:STATus]?
:USEFul
:FAIL
:LEVel?
:TIMe?
[:STATus]?

FETCh:GSM[:MEAS<i>]:BER?

Description: Queries the error rate of BER.

Response: <NR2> %

Example: FETC:GSM:BER?

FETC:GSM:MEAS1:BER?

FETCh:GSM[:MEAS<i>]:BER:SPEech:EFRames?

Description: Queries the speech erased frames of BER.

Response: <NR1>

Example: FETC:GSM:BER:SPE:EFR?

FETC:GSM:MEAS1:BER:SPE:EFR?

FETCh:GSM[:MEAS<i>]:BER:SPEech:FER?

Description: Queries the speech frame erasure rate of BER.

Response: <NR2> %

Example: FETC:GSM:BER:SPE:FER?

FETC:GSM:MEAS1:BER:SPE:FER?

FETCh:GSM[:MEAS<i>]:BER:TOTal:BITS?

Description: Queries the total bits of BER.

Response: <TBD>

Example: FETC:GSM:BER:TOT:BITS?

FETC:GSM:MEAS1:BER:TOT:BITS?

FETCh:GSM[:MEAS<i>]:BER:TOTal:ERRor?

Description: Queries the bits in error of BER.

Response: <NR1>

Example: FETC:GSM:BER:TOT:ERR?

FETC:GSM:MEAS1:BER:TOT:ERR?

FETCh:GSM[:MEAS<i>]:BER:TOTal:FRAMes?

Description: Queries the total frames of BER.

Response: <NR1>

Example: FETC:GSM:BER:TOT:FRAM?

FETC:GSM:MEAS1:BER:TOT:FRAM?

FETCh:GSM[:MEAS<i>]:BURSt:DTSC?

Description: Queries the detected TSC of burst.

Response: <NR1>

Example: FETC:GSM:BURS:DTSC?

FETC:GSM:MEAS1:BURS:DTSC?

FETCh:GSM[:MEAS<i>]:BURSt:DTYPe?

Description: Queries the detected burst type.

Response: <CRD>

Example: FETC:GSM:BURS:DTYP?

FETC:GSM:MEAS1:BURS:DTYP?

FETCh:GSM[:MEAS<i>]:BURSt:FPOWer?

Description: Queries the fast burst power.

Response: <NR2> dBm

Example: FETC:GSM:BURS:FPOW?

FETC:GSM:MEAS1:BURS:FPOW?

FETCh:GSM[:MEAS<i>]:BURSt:POWer?

Description: Queries the burst power.

Response: <NR2> dBm

Example: FETC:GSM:BURS:POW?

FETC:GSM:MEAS1:BURS:POW?

FETCh:GSM[:MEAS<i>]:BURSt:TERRor?

Description: Queries the burst timing error.

Response: <NR1>

Example: FETC:GSM:BURS:TERR?

FETC:GSM:MEAS1:BURS:TERR?

FETCh:GSM[:MEAS<i>]:EDGE:DROop?

Description: Queries the droop of EDGE.

Response: <NR2>

Example: FETC:GSM:EDGE:DRO?

FETC:GSM:MEAS1:EDGE:DRO?

FETCh:GSM[:MEAS<i>]:EDGE:EVM:NFP?

Description: Queries the 95th percentile EVM of EDGE.

Response: <NR2>

Example: FETC:GSM:EDGE:EVM:NFP?

FETC:GSM:MEAS1:EDGE:EVM:NFP?

FETCh:GSM[:MEAS<i>]:EDGE:EVM:PEAK?

Description: Queries the peak EVM of EDGE.

Response: <NR2>

Example: FETC:GSM:EDGE:EVM:PEAK?

FETC:GSM:MEAS1:EDGE:EVM:PEAK?

FETCh:GSM[:MEAS<i>]:EDGE:EVM:RMS?

Description: Queries the RMS EVM of EDGE.

Response: <NR2>

Example: FETC:GSM:EDGE:EVM:RMS?

FETC:GSM:MEAS1:EDGE:EVM:RMS?

FETCh:GSM[:MEAS<i>]:EDGE:OOSuppression?

Description: Queries the origin offset suppression of EDGE.

Response: <NR2>

Example: FETC:GSM:EDGE:OOS?

FETC:GSM:MEAS1:EDGE:OOS?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:COMPlete:FAIL:LEVel?

Description: Queries the complete profile fail level of power.

Response: <NR2> dBr

Example: FETC:GSM:POW:PROF:COMP:FAIL:LEV?

FETC:GSM:MEAS1:POW:PROF:COMP:FAIL:LEV?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:COMPlete:FAIL:TIME?

Description: Queries the complete profile fail time of power.

Response: <NR2> symbols

Example: FETC:GSM:POW:PROF:COMP:FAIL:TIME?

FETC:GSM:MEAS1:POW:PROF:COMP:FAIL:TIME?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:COMPlete[:STATus]?

Description: Queries the complete profile pass/fail status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: FETC:GSM:POW:PROF:COMP?

FETC:GSM:MEAS1:POW:PROF:COMP:STAT?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:FALLing:FAIL:LEVel?

Description: Queries the falling profile fail level of power.

Response: <NR2> dBr

Example: FETC:GSM:POW:PROF:FALL:FAIL:LEV?

FETC:GSM:MEAS1:POW:PROF:FALL:FAIL:LEV?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:FALLing:FAIL:TIME?

Description: Queries the falling profile fail time of power.

Response: <NR2> symbols

Example: FETC:GSM:POW:PROF:FALL:FAIL:TIME?

FETC:GSM:MEAS1:POW:PROF:FALL:FAIL:TIME?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:FALLing[:STATus]?

Description: Queries the falling profile pass/fail status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: FETC:GSM:POW:PROF:FALL?

FETC:GSM:MEAS1:POW:PROF:FALL:STAT?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:RISing:FAIL:LEVel?

Description: Queries the rising profile fail level of power.

Response: <NR2> dBr

Example: FETC:GSM:POW:PROF:RIS:FAIL:LEV?

FETC:GSM:MEAS1:POW:PROF:RIS:FAIL:LEV?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:RISing:FAIL:TIME?

Description: Queries the rising profile fail time of power.

Response: <NR2> symbols

Example: FETC:GSM:POW:PROF:RIS:FAIL:TIME?

FETC:GSM:MEAS1:POW:PROF:RIS:FAIL:TIME?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:RISing[:STATus]?

Description: Queries the rising profile pass/fail status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: FETC:GSM:POW:PROF:RIS?

FETC:GSM:MEAS1:POW:PROF:RIS:STAT?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:USEFul:FAIL:LEVel?

Description: Queries the useful profile fail level of power.

Response: <NR2> dBr

Example: FETC:GSM:POW:PROF:USEF:FAIL:LEV?

FETC:GSM:MEAS1:POW:PROF:USEF:FAIL:LEV?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:USEFul:FAIL:TIME?

Description: Queries the useful profile fail time of power.

Response: <NR2> symbols

Example: FETC:GSM:POW:PROF:USEF:FAIL:TIME?

FETC:GSM:MEAS1:POW:PROF:USEF:FAIL:TIME?

FETCh:GSM[:MEAS<i>]:POWer:PROFile:USEFul[:STATus]?

Description: Queries the useful profile pass/fail status of power.

Response: <Boolean>

Returned values: PASS | FAIL

Example: FETC:GSM:POW:PROF:USEF?

FETC:GSM:MEAS1:POW:PROF:USEF:STAT?

CONFigure commands

```
CONFigure
    :GSM
        :MEASurement<i>
            :ATTenuation
                :MODE
                :RFATtenuation
            :BAND
            :CHANnel
            :DOWNlink
                :FREQuency
                :GENerator
                :POWer
                :TSEQuence
            :DUT[0]|1|2|3]
                :BURSt
                    AUTO
                    [:TYPE]\?
                :SLOT\?
                :TSC\?
                    AUTO\?
                    [:TYPE]\?
            :FREQuency
            :HEADroom
            :HPCCh
            :PCLevel
            :RLMode
                :MDOPower
            :SYSTem
                :ANALysis
                    :BER
                        :FRAMes\?
                        :LOOPback
                            [:MODE]\?
                        :STATe
                    [:BURSt]
                        :LATency
                        :THReshold
                    :LENGth
                    [:SPECtrum]
                        :RBW\?
                        :SPAN\?
```

CONFigure:GSM:MEAS<i>:ATTenuation:MODE

Description: Sets the attenuation mode of the GSM uplink configuration.

Parameters: <CPD>

Valid values: AUTO | MANual

Example: CONF:GSM:MEAS1:ATT:MODE AUTO

CONFigure:GSM:MEAS<i> ATTenuation:RFATtenuation

Description: Sets the RF attenuation of the GSM uplink configuration.

Parameters: <NR1>dB

Example: CONF:GSM:MEAS1:ATT:RFAT 29dB

CONFigure:GSM:MEAS<i>:BAND

Description: Sets the band of the GSM configuration.

Parameters: <CPD>

Valid values: GSM 400 | GSM 700 | GSM 850 | GSM 900 | GSM1800 | DSC 1800 | PSC 1900

Example: CONF:GSM:MEAS1:BAND 1100

CONFigure:GSM:MEAS<i>:CHANnel

Description: Sets the channel of the GSM configuration.

Parameters: <NR1>

Valid values: 0 to 1023

Example: CONF:GSM:MEAS1:CHAN 100

CONFigure:GSM:MEAS<i>:DOWNlink:FREQuency

Description: Sets the generator frequency of the GSM downlink configuration.

Parameters: <NR2>

Valid units: Hz | MHz | KHz | GHz

Example: CONF:GSM:MEAS1:DOWN:FREQ 2000.00MHz

CONFigure:GSM:MEAS<i>:DOWNlink:GENerator

Description: Sets the generator of the GSM downlink configuration.

Parameters: <CPD>

Valid values: TX1 | TX2 | NONE

Example: CONF:GSM:MEAS1:DOWN:GEN TX1

CONFigure:GSM:MEAS<i>:DOWNlink:POWer

Description: Sets the DUT input power of the GSM downlink configuration.

Parameters: <NR2>dBm

Example: CONF:GSM:MEAS1:DOWN:POWer -10.00dBm

CONFigure:GSM:MEAS<i>:DOWNlink:TSEQuence

Description: Sets the training sequence of the GSM downlink configuration.

Parameters: <NR1>

Valid values: 0 | 5

Example: CONF:GSM:MEAS1:DOWN:TSEQ 5

CONFigure:GSM:MEAS<i>:DUT[0|1|2|3]:BURSt[:TYPE]

Description: Sets the burst type of the DUT configuration.

Parameters: <CPD>

Valid values: NORMal | EDGE | ACCess

Example: CONF:GSM:MEAS1:DUT2:BURS[:TYPE] NORM

CONFigure:GSM:MEAS<i>:DUT[0|1|2|3]:SLOT

Description: Sets the timeslot of the DUT configuration.

Parameters: <NR1>

Valid values: 0 to 7

Example: CONF:GSM:MEAS1:DUT1:SLOT 6

CONFigure:GSM:MEAS<i>:DUT[0|1|2|3]:TSC[:TYPE]

Description: Sets the automatic TSC detection of the DUT configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:GSM:MEAS1:DUT 0:TSC[:TYPE] ON

CONFigure:GSM:MEAS<i>:FREQuency

Description: Sets the RX frequency of the GSM uplink configuration.

Parameters: <NR2>

Valid units: Hz | MHz | KHz | GHz

Example: CONF:GSM:MEAS1:FREQ 890000 Hz

CONFigure:GSM:MEAS<i>:HEADroom

Description: Sets the headroom of the GSM uplink configuration.

Parameters: <NR2>dB

Example: CONF:GSM:MEAS1:HEAD 16.02dB

CONFigure:GSM:MEAS<i>:HPCCh

Description: Sets the high power CCH of the GSM configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:GSM:MEAS1:HPCC ON

CONFigure:GSM:MEAS<i>:PCLevel

Description: Sets the power control level of the GSM configuration.

Parameters: <NR1>

Valid values: 4 to 31

Example: CONF:GSM:MEAS1:PCL 5

CONFigure:GSM:MEAS<i>:RLMode

Description: Sets the reference level mode of the GSM uplink configuration.

Parameters: <CPD>

Valid values: PCL | MANual

Example: CONF:GSM:MEAS1:RLM PCL

CONFigure:GSM:MEAS<i>:RLMode:MDOPower

Description: Sets the maximum DUT output power of the GSM uplink configuration.

Parameters: <NR2>dBm

Example: CONF:GSM:MEAS1:RXTX:ULC:RLM:MDOP 15.00dBm

CONFigure:GSM:MEAS<i>:SYSTem:ANALysis:BER:FRAMes

Description: Sets the BER burst frames to test the GSM system configuration.

Parameters: <NR1>

Example: CONF:GSM:MEAS1:SYST:ANAL:BER:FRAM 100

CONFigure:GSM:MEAS<i>:SYSTem:ANALysis:BER:LOOPback[:MODe]

Description: Sets the loopback mode of the GSM system configuration.

Parameters: <CPD>

Valid values: LBAB | LBC

Example: CONF:GSM:MEAS1:SYST:ANAL:BER:LOOP[:MODE]LBC

CONFigure:GSM:MEAS<i>:SYSTem:ANALysis:BER:STATe

Description: Sets the BER setup of the GSM system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:GSM:MEAS1:SYST:ANAL:BER:STAT ON

CONFigure:GSM:MEAS<i>:SYSTem:ANALysis[:BURSt]:THReshold

Description: Sets the burst detect threshold of the GSM system configuration.

Parameters: <NR2>dB

Example: CONF:GSM:MEAS1:SYST:ANAL:BURS:THR 15.00dB

CONFigure:GSM:MEAS<i>:SYSTem:ANALysis:LENGth

Description: Queries the search length of the GSM system configuration.

Parameters: <NR2> ms

Example: CONF:GSM:MEAS1:SCON:LEN

CONFigure:GSM:MEAS<i>:SYSTem:ANALysis[:SPECtrum]:RBW

Description: Sets the resolution bandwidth of the GSM system configuration.

Parameters: <NR1>KHz

Valid values: 10 KHz | 30 KHz | 100 KHz

Example: CONF:GSM:MEAS1:SYST:ANAL[:SPEC]:RBW 10 KHz

CONFigure:GSM:MEAS<i>:SYSTem:ANALysis[:SPECtrum]:SPAN

Description: Sets the spectrum span of the GSM system configuration.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:GSM:MEAS1:SYST:ANAL[:SPEC]:SPAN .500000MHz

TRACe commands

READ
:GSM
[:MEASurement<i>]
:TRACe
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:EVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:OSModulation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:OSSWitching
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PEVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

```
:POWer
    :PROFile
        :COMPlete
            :AVERage?
            [:CURRent]?
            :MAXimum?
            :MINimum?
        :FALLing
            :AVERage?
            [:CURRent]?
            :MAXimum?
            :MINimum?
        :RISing
            :AVERage?
            [:CURRent]?
            :MAXimum?
            :MINimum?
        :USEFul
            :AVERage?
            [:CURRent]?
            :MAXimum?
            :MINimum?
```

EVM vs. time results (trace)

The following commands return the EVM vs. time trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:EVTime:AVERage?

READ:GSM[:MEAS<i>]:TRACe:EVTime[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:EVTime:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:EVTime:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:EVTime:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:EVTime[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:EVTime:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:EVTime:MINimum?

This trace contains time (symbols) in the x axis and EVM in the y axis.

Returned values: < time1, evm 1>... < time n, evm n>

Time range: 0 to 147 symbols

EVM: -0 to 2 %

Example: READ:GSM:MEAS1:TRAC:EVT:MIN?

ORFS spectrum modulation results (trace)

The following commands return the ORFS spectrum due to modulation trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:OSModulation:AVERage?

READ:GSM[:MEAS<i>]:TRACe:OSModulation[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:OSModulation:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:OSModulation:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:OSModulation:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:OSModulation[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:OSModulation:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:OSModulation:MINimum?

This trace contains frequency in the x axis and power in the y axis.

Returned values: < freq1, power 1>... < freq n, power n>

Frequency range: 1998.75 to 2001.25 MHz

Power: -100 to 0 dBm

Example: READ:GSM:MEAS1:TRAC:OSM?

ORFS spectrum switching (trace)

The following commands return the ORFS spectrum due to switching trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:OSSWitching:AVERage?

READ:GSM[:MEAS<i>]:TRACe:OSSWitching[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:OSSWitching:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:OSSWitching:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:OSSWitching:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:OSSWitching[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:OSSWitching:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:OSSWitching:MINimum?

This trace contains frequency in the x axis and power in the y axis.

Returned values: < freq1, power 1>... < freq n, power n>

Frequency range: 1998.75 to 2001.25 MHz

Power: -100 to 0 dBm

Example: READ:GSM:MEAS1:TRAC:OSSW?

Phase error vs. time results (trace)

The following commands return the phase error vs. time trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:PEVTime:AVERage?

READ:GSM[:MEAS<i>]:TRACe:PEVTime[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:PEVTime:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:PEVTime:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:PEVTime:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:PEVTime[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:PEVTime:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:PEVTime:MINimum?

This trace contains time (symbols) in the x axis and phase error in the y axis.

Returned values: < time1, phase error 1>... < time n, phase error n>

Time range: 0 to 147 symbols

Phase Error: -10 to 10 degree

Example: READ:GSM:MEAS1:TRAC:PEVT?

Complete power profile results (trace)

The following commands return the complete power profile trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete:AVERage?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:COMPlete:MINimum?

This trace contains time (symbols) in the x axis and power in the y axis.

Returned values: < time1, power 1>... < time n, power n>

Time range: -1000 to 1000 symbols

Power range: - -90 to 10 dBr

Example: READ:GSM:MEAS1:TRAC:POW:PROF:COMP?

Falling power profile results (trace)

The following commands return the falling power profile trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing:AVERage?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:FALLing:MINimum?

This trace contains time (symbols) in the x axis and power in the y axis.

Returned values: < time1, power 1>... < time n, power n>

Time range: -1000 to 1000 symbols

Power Range: -90 to 10 dBr

Example: READ:GSM:MEAS1:TRAC:POW:PROF:FALL:MAX

Rising power profile results (trace)

The following commands return the rising power profile trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing:AVERage?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:RISing:MINimum?

This trace contains time (symbols) in the x axis and power in the y axis.

Returned values: < time1, power 1>... < time n, power n>

Time range: -1000 to 1000 symbols

Power range: -90 to 10 dBr

Example: READ:GSM:MEAS1:TRAC:POW:PROF:RIS?

Useful power profile results (trace)

The following commands return the useful power profile trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul:AVERage?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul[:CURRent]?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul:MAXimum?

READ:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul:MINimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul:AVERage?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul[:CURRent]?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul:MAXimum?

FETCh:GSM[:MEAS<i>]:TRACe:POWer:PROFile:USEFul:MINimum?

This trace contains time (symbols) in the x axis and power in the y axis.

Returned values: < time1, power 1>... < time n, power n>

Time range: -1000 to 1000 symbols

Power range:- -24 to 6 dBr

Example: READ:GSM:MEAS1:TRAC:POW:PROF:USEF:AVER?

TRIGger commands

TRIGger
:GSM
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

LTE DOWNLINK COMMANDS

READ commands

READ
:LTEDownlink
[:MEASurement<i>]
:ACLR
:CHANnel?<j>
:OFFSet?<j>
:POWer?<j>
:CCDF?
:CONStellation?
:CPVTime?
:EVSYmbol?
:MACCuracy
:EVM
:RMS?
:FERRor?
:OBW
:LOWer?
:UPPer?
:SMASk?
:FREQuency?
:LEVel?
:STATus?
:SPECtrum?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:CHANnel
:EVM
:RMS?<CHANnel>
:POWer?<CHANnel>
:EVCarrier?
:MACCuracy
:CLEak?
:IQERror
:GIMBalance?
:SKEW\?
:SCERror?

READ:LTEDownlink[:MEAS<i>]:CHANnel:EVM:RMS?<CHANnel>

Description: Starts a new measurement and retrieves the channel EVM RMS for the given channel.

Parameters: <cpd> PILot | DATA | PBCH | PCFich | PHICh | PDCCh | PDSCh | PSYNc | SSYNc

Response: <NR2> %

Example: READ:LTED:CHAN:EVM:RMS?<PILot>

READ:LTED:MEAS1:CHAN:EVM:RMS?<PDSC>

READ:LTEDownlink[:MEAS<i>]:CHANnel:POWer?<CHANnel>

Description: Starts a new measurement and retrieves the channel power for the given channel.

Parameters: <cpd> PILot | DATA | PBCH | PCFich | PHICh | PDCCh | PDSCh | PSYNc | SSYNc

Response: <NR2> dB

Example: READ:LTED:CHAN:POW?<DATA>

READ:LTED:MEAS1:CHAN:POW?< PHIC>

READ:LTEDownlink[:MEAS<i>]:EVCarrier?

Description: Starts a new measurement and retrieves the EVM vs. carrier measurement.

Parameters: None

Response: <NR2>

Example: READ:LTED:EVC?

READ:LTED:MEAS1:EVC?

READ:LTEDownlink[:MEAS<i>]:MACCuracy:CLEak?

Description: Queries the carrier leak of the modulation accuracy.

Parameters: None

Response: <NR2>

Example: READ:LTED:MACC:CLE?

READ:LTED:MEAS1:MACC:CLE?

READ:LTEDownlink[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Starts a new measurement and retrieves the IQ gain imbalance of the modulation accuracy.

Parameters: None

Response: <NR2>dB

Example: READ:LTED:MACC:IQER:GIMB?

READ:LTED:MEAS1:MACC:IQER:GIMB?

READ:LTEDownlink[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Starts a new measurement and retrieves the IQ skew of the modulation accuracy.

Parameters: None

Response: <NR2>(degree)

Example: READ:LTED:MACC:IQER:SKEW?

READ:LTED:MEAS1:MACC:IQER:SKEW?

READ:LTEDownlink[:MEAS<i>]:MACCuracy:SCERror?

Description: Starts a new measurement and retrieves the symbol clock error of the modulation accuracy.

Parameters: None

Response: <NR2>ppm

Example: READ:LTED:MACC:SCER?

READ:LTED:MEAS1:MACC:SCER?

FETCh commands

FETCh
:LTEDownlink
[:MEASurement<i>]
:ACLR
:CHANnel?<j>
:OFFSet?<j>
:POWer?<j>
:CCDF?
:CONStellation?
:CPVTime?
:EVSYmbol?
:MACCuracy
:EVM
:RMS?
:FERRor?
:OBW
:LOWer?
:UPPer?
:SMASk?
:FREQuency?
:LEVel?
:STATus?
:SPECtrum?

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

:CHANnel
:EVM
:RMS?<CHANnel>
:POWer?<CHANnel>
:EVCarrier?
:MACCuracy
:CLEak
:IQERror
:GIMBalance\?
:SKEW\?
:SCERror?

FETCh:LTEDownlink[:MEAS<i>]:CHANnel:EVM:RMS?<CHANnel>

Description: Queries the channel EVM RMS for the given channel.

Parameters: <cpd> PILot | DATA | PBCH | PCFich | PHICh | PDCCh | PDSCh | PSYNc | SSYNc

Response: <NR2> %

Example: FETC:LTED:CHAN:EVM:RMS?<PILot>

FETC:LTED:MEAS1:CHAN:EVM:RMS?<PDSC>

FETCh:LTEDownlink[:MEAS<i>]:CHANnel:POWer?<CHANnel>

Description: Queries the channel power for the given channel.

Parameters: <cpd> PILot | DATA | PBCH | PCFich | PHICh | PDCCh | PDSCh | PSYNc | SSYNc

Response: <NR2> dB

Example: FETC:LTED:CHAN:POW?<DATA>

FETC:LTED:MEAS1:CHAN:POW?<PHIC>

FETCh:LTEDownlink[:MEAS<i>]:EVCarrier?

Description: Queries the EVM vs. carrier measurement.

Parameters: None

Response: <NR2>

Example: FETC:LTED:EVC?

FETC:LTED:MEAS1:EVC?

FETCh:LTEDownlink[:MEAS<i>]:MACCuracy:CLEak?

Description: Queries the carrier leak of the modulation accuracy.

Parameters: None

Response: <NR2>

Example: FETC:LTED:MACC:CLE?

FETC:LTED:MEAS1:MACC:CLE?

FETCh:LTEDownlink[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Queries the IQ gain imbalance of the modulation accuracy.

Parameters: None

Response: <NR2>dB

Example: FETC:LTED:MACC:IQER:GIMB?

FETC:LTED:MEAS1:MACC:IQER:GIMB?

FETCh:LTEDownlink[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Queries the IQ Skew of the modulation accuracy.

Parameters: None

Response: <NR2>(degree)

Example: FETC:LTED:MACC:IQER:SKEW?

FETC:LTED:MEAS1:MACC:IQER:SKEW?

FETCh:LTEDownlink[:MEAS<i>]:MACCuracy:SCERror?

Description: Queries the symbol clock error of the modulation accuracy.

Parameters: None

Response: <NR2>ppm

Example: FETC:LTED:MACC:SCER?

FETC:LTED:MEAS1:MACC:SCER?

CONFigure commands

CONFigure
:LTEDownlink
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ACLR
:ALPHa\?<i>
:BWIDth\?
:MEASured\?<i>
[:CHANnel]
:COUNt?
:OFFset\?<i>
:TYPe\?<i>
:ANALysis
:LENgth\?
:MASk
[:TYPE]\?
:SYSTem
:BWIDth
:CELLid
:CYCLic
[:PREFix]
:PDCCh
:DOWNlink
:DCIFormat
:FORMat
:INDex
:SSPace
:STATus
:UPLink
:DCIFormat
:FORMat
:INDex
:SNUMber
:SSPace
:STATus
:PHICh
:DURation
:NG
:SEQNumber
:UEGRoup

:PMTYpe
:UEID
:TRAcking
:AMPLitude\?
:PHASe\?
:TIME\?

CONFigure:LTEDownlink:MEAS<i>:ACLR:ALPHa<i>

Description: Sets the alpha of the ACLR configuration for the user channel.

Parameters: <NR2>

Valid values: 0 to 1.0

Example: CONF:LTED:MEAS1:ACLR:ALPH1 0.99

CONFigure:LTEDownlink:MEAS<i>:ACLR:BWIDth

Description: Sets the bandwidth of the ACLR configuration for the LTE channel.

Parameters: <NR2> MHz

Valid values: 1.4 | 3.0 | 5.0 | 10.0 | 15.0 | 20.0 MHz

Example: CONF:LTED:MEAS1:ACLR:BWID 1.4 MHZ

CONFigure:LTEDownlink:MEAS<i>:ACLR:BWIDth:MEASured<i>

Description: Sets the measurement bandwidth of the ACLR configuration for the user channel.

Parameters: <NR2>

Valid units: KHz | Hz | MHz | GHz

Example: CONF:LTED:MEAS1:ACLR:BWID:MEAS1 1.000000 MHZ

CONFigure:LTEDownlink:MEAS<i>:ACLR[:CHANnel]

Description: Sets the number of channels of the ACLR configuration.

Parameters: <NR1>

Valid values: 1 to 15

Example: CONF:LTED:MEAS1:ACLR 10

CONF:LTED:MEAS1:ACLR:CHAN 15

CONFigure:LTEDownlink:MEAS<i>:ACLR:OFFSet<i>

Description: Sets the frequency offset for all adjacent channels of the ACLR configuration.

Parameters: <NR2>

Valid units: KHz | Hz | MHz | GHz

Example: CONF:LTED:MEAS1:ACLR:OFFS 2 1.200000 MHz

CONFigure:LTEDownlink:MEAS<i>:ACLR:TYPE<i>

Description: Sets the channel type of the ACLR configuration.

Parameters: <CPD>

Valid values: LTE | UMTS | USER

Example: CONF:LTED:MEAS1:ACLR:TYPE1 LTE

CONFigure:LTEDownlink:MEAS<i>:ANALysis:LENGth

Description Sets the search length of the LTE downlink system configuration.

Parameters: <NR2>

Valid values: Positive

Valid units: s | us | ms | ns

Example: CONF:LTED:MEAS1:ANAL:LENG 2000.000 us

CONFigure:LTEDownlink:MEAS<i>:ANALysis:MASK[:TYPE]

Description: Sets the spectrum mask of the LTE downlink system configuration.

Parameters: <CPD>

Valid values: CAL1 | CAG1 | CBL1 | CBG1 | ABS1 | ABS2 | ABS3

Example: CONF:LTED:MEAS1:ANAL:MASK ABS1

CONF:LTED:MEAS1:ANAL:MASK:TYPE CAL1

CONFigure:LTEDownlink:MEAS<i>:SYSTem:BWIDth

Description: Sets the bandwidth of the LTE downlink system configuration.

Parameters: <NR2>MHz

Valid values: 1.4 | 3.0 | 5.0 | 10.0 | 15.0 | 20.0 MHz

Example: CONF:LTED:MEAS1:SYST:BWID 3.0 MHz

CONFigure:LTEDownlink:MEAS<i>:SYSTem:CELLid

Description: Sets the cell ID of the LTE downlink system configuration.

Parameters: <NR1>

Valid values: 0 to 503

Example: CONF:LTED:MEAS1:SYST:CELL 200

CONFigure:LTEDownlink:MEAS<i>:SYSTem:CYCLic[:PREFix]

Description: Sets the cyclic prefix of the LTE downlink system configuration.

Parameters: <CPD>

Valid values: NORMal | EXTended

Example: CONF:LTED:MEAS1:SCON:CYCL NORM

CONF:LTED:MEAS1:SCON:CYCL:PREF EXT

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:DOWNlink :DCIFormat

Description: Sets the DCI format for the PDCCH downlink channel configuration.

Parameters: <CPD>

Valid values: 0 | 1 | 1A | 1B | 1C | 2 | 3B3A

Example: CONF:LTED:MEAS1:SYST:PDCC:DOWN:DCIF 1A

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:DOWNlink :FORMat

Description: Sets the format for the PDCCH downlink channel configuration.

Parameters: <NR1>

Valid values: 0 to 3

Example: CONF:LTED:MEAS1:SYST:PDCC:DOWN:FORM 1

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:DOWNlink:INDex

Description: Sets the index for the PDCCH downlink channel configuration.

Parameters: <NR1>

Valid values: 0 to 5

Example: CONF:LTED:MEAS1:SYST:PDCC:DOWN:IND 2

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:DOWNlink:SSPace

Description: Sets the search space type for the PDCCH downlink channel configuration.

Parameters: <CPD>

Valid values: UESPecific | COMMon

Example: CONF:LTED:MEAS1:SYST:PDCC:DOWN:SSP COMM

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:DOWNlink:STATus

Description: Sets the transmission status for the PDCCH downlink channel configuration.

Parameters: <CPD>

Valid values: DTX | NDTX

Example: CONF:LTED:MEAS1:SYST:PDCC:DOWN:STAT NDTX

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:UPLink:DCIFormat

Description: Sets the DCI format for the PDCCH uplink channel configuration.

Parameters: <CPD>

Valid values: 0 | 1 | 1A | 1B | 1C | 2 | 3B3A

Example: CONF:LTED:MEAS1:SYST:PDCC:UPL:DCIF 1B

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:UPLink:FORMat

Description: Sets the format for the PDCCH uplink channel configuration.

Parameters: <NR1>

Valid values: 0 to 3

Example: CONF:LTED:MEAS1:SYST:PDCC:UPL:FORM 2

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:UPLink:INDex

Description: Sets the index for the PDCCH uplink channel configuration.

Parameters: <NR1>

Valid values: 0 to 5

Example: CONF:LTED:MEAS1:SYST:PDCC:UPL:IND 4

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:UPLink:SNUMber

Description: Sets the symbol number for the PDCCH uplink channel configuration.

Parameters: <NR1>

Example: CONF:LTED:MEAS1:SYST:PDCC:UPL:SNUM 550

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:UPLink:SSPace

Description: Sets the search space type for the PDCCH uplink channel configuration.

Parameters: <CPD>

Valid values: UESPecific | COMMon

Example: CONF:LTED:MEAS1:SYST:PDCC:UPL:SSP COMM

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PDCCh:UPLink:STATus

Description: Sets the transmission status for the PDCCH uplink channel configuration.

Parameters: <CPD>

Valid values: DTX | NDTX

Example: CONF:LTED:MEAS1:SYST:PDCC:UPL:STAT DTX

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PHICh:DURation

Description: Sets the duration for the PHICH channel configuration.

Parameters: <CPD>

Valid values: NORMal | EXTended

Example: CONF:LTED:MEAS1:SYST:PHIC:DUR NORM

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PHICh:NG

Description: Sets the group number for the PHICH channel configuration.

Parameters: <NR2>

Example: CONF:LTED:MEAS1:SYST:PHIC:NG 212

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PHICh:SEQNumber

Description: Sets the sequence number for the PHICH channel configuration.

Parameters: <NR1>

Valid values: 0 to 7

Example: CONF:LTED:MEAS1:SYST:PHIC:SEQN 5

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PHICh:UEGRoup

Description: Sets the UE group for the PHICH channel configuration.

Parameters: <NR1>

Valid values: 0 to 49

Example: CONF:LTED:MEAS1:SYST:PHIC:UEGR 10

CONFigure:LTEDownlink:MEAS<i>:SYSTem:PMTYpe

Description: Sets the PDSCH modulation type of the LTE downlink system configuration.

Parameters: <CPD>

Valid values: QPSK | 16QAm | 64 QAm

Example: CONF:LTED:MEAS1:SYST:PMTY QPSK

CONFigure:LTEDownlink:MEAS<i>:SYSTem:UEID

Description: Sets the UE ID of the LTE downlink system configuration.

Parameters: <NR1>

Valid values: 0 to 65535

Example: CONF:LTED:MEAS1:SYST:UEID 555

CONFigure:LTEDownlink:MEAS<i>:SYSTem:TRAcking:AMPLitude

Description: Sets the pilot amplitude tracking of the LTE downlink system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTED:MEAS1:SYST:TRA:AMPL ON

CONFigure:LTEDownlink:MEAS<i>:SYSTem:TRAcking:PHASe

Description: Sets the pilot phase tracking of the LTE downlink system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTED:MEAS1:SYST:TRA:PHAS OFF

CONFigure:LTEDownlink:MEAS<i>:SYSTem:TRAcking:TIME

Description: Sets the pilot time tracking of the LTE downlink system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:LTED:MEAS1:SYST:TRA:TIME OFF

TRACe commands

READ
:LTEDownlink
[:MEASurement<i>]
:CCDF
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CONStellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:EVSYmbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:TRACe
:SMASk
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:EVCarrier
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

EVM vs. carrier results (trace)

The following commands return the EVM vs. carrier trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier:AVERage?

READ:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier[:CURRent]?

READ:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier:MAXimum?

READ:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier:MINimum?

FETCh:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier:AVERage?

FETCh:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier[:CURRent]?

FETCh:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier:MAXimum?

FETCh:LTEDownlink[:MEAS<i>]:TRACe:EVCarrier:MINimum?

The EVM vs. carrier trace contains subcarrier in the x axis and EVM (%) in the y axis.

Returned values: < subcarrier1,evm1>...:< subcarrier n,evm n>

Subcarrier range: -1000 to 1000

EVM range: 0 % to 10 %

Example: READ:LTED:MEAS1:TRAC:EVC:MAX?

TRIGger commands

TRIGger
:LTEDownlink
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

CDMA 2000 REVERSE LINK COMMANDS

READ commands

READ
:CDMA
[:MEASurement<i>]
:ACPR?
:LEVel?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:CDE?<SCARrier>
:CDP?<SCARrier>
:CPVTime?
:POWer
:AVERage
:MACCuracy
:CDE
:PEAK?
:RMS?
:EVM
:FERRor?
:SMASk
:FREQuency?
:LEVel?
:STATus?
:SPECtrum?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:CCONStellation?
:MACCuracy
:CDE
:IPEak?
:QPEak?
:QOOFfset?
:RFACtor?
:POWer
:CHANnel?
:QCONStellation?

:SMASk
:FPOints?
:LERRor?

READ:CDMA[:MEAS<i>]:CCONstellation?

Description: Starts a new measurement and retrieves the composite constellation results.

Response: <NR2>

Example: READ:CDMA:CCON?

READ:CDMA:MEAS1:CCON?

READ:CDMA[:MEAS<i>]:MACCuracy:CDE:IPEak?

Description: Starts a new measurement and retrieves the CDE peak I of the modulation accuracy.

Response: <NR2> dB

Example: READ:CDMA:MACC:CDE:IPE?

READ:CDMA:MEAS1:MACC:CDE:IPE?

READ:CDMA[:MEAS<i>]:MACCuracy:CDE:QPEak?

Description: Starts a new measurement and retrieves the CDE peak Q of the modulation accuracy.

Response: <NR2> dB

Example: READ:CDMA:MACC:CDE:QPE?

READ:CDMA:MEAS1:MACC:CDE:QPE?

READ:CDMA[:MEAS<i>]:MACCuracy:QOOFfset?

Description: Starts a new measurement and retrieves the QPSK origin offset of the modulation accuracy.

Response: <NR2> %

Example: READ:CDMA:MACC:QOOF?

READ:CDMA:MEAS1:MACC:QOOF?

READ:CDMA[:MEAS<i>]:MACCuracy:RFACtor?

Description: Starts a new measurement and retrieves the rho factor of modulation accuracy.

Response: <NR1>

Example: READ:CDMA:MACC:RFAC?

READ:CDMA:MEAS1:MACC:RFAC?

READ:CDMA[:MEAS<i>]:POWer:CHANnel?

Description: Starts a new measurement and retrieves the channel power results of the CDMA measurement.

Response: <NRf>

Example: READ:CDMA POW:CHAN?

READ:CDMA:MEAS1:POW:CHAN?

READ:CDMA[:MEAS<i>]:QCONstellation?

Description: Starts a new measurement and retrieves the QPSK constellation results.

Response: <NR2> %

Example: READ:CDMA:QCON?

READ:CDMA:MEAS1:QCON?

READ:CDMA[:MEAS<i>]:SMASk:FPOints?

Description: Starts a new measurement and retrieves the failure points of spectral mask.

Response: <NR1>

Example: READ:CDMA SMAS:FPO?

READ:CDMA:MEAS1:SMAS:FPO?

READ:CDMA[:MEAS<i>]:SMASk:LERRor?

Description: Starts a new measurement and retrieves the fail level error of spectral mask.

Response: <NR2> dB

Example: READ:CDMA SMAS:LERR?

READ:CDMA:MEAS1:SMAS:LERR?

FETCh commands

FETCh
:CDMA
[:MEASurement<i>]
:ACPR?
:LEVel?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:CDE
:CDP
:CPVTime
:MACCuracy
:EVM
:PEAK?
:RMS?
:FERRor?
:POWer
:AVERage
:SMASk
:FREQuency?
:LEVel?
:STATus?
:SPECtrum

For the definition/behavior of the above commands, refer to the generic section FETCh commands.

:CCONStellation?
:MACCuracy
:CDE
:IPEak?
:QPEak?
:QOOFfset
:RFACtor?
:POWer
:CHANnel?
:QCONStellation?
:SMASk
:FPOints?
:LERRor?

FETCh:CDMA[:MEAS<i>]:CCONstellation?

Description: Queries the composite constellation results.

Response: <NR2>

Example: FETC:CDMA:CCON?

FETC:CDMA:MEAS1:CCON?

FETCh:CDMA[:MEAS<i>]:MACCuracy:CDE:IPEak?

Description: Queries the CDE peak I of the modulation accuracy.

Response: <NR2> dB

Example: FETC:CDMA:MACC:CDE:IPE?

FETC:CDMA:MEAS1:MACC:CDE:IPE?

FETCh:CDMA[:MEAS<i>]:MACCuracy:CDE:QPEak?

Description: Queries the CDE peak Q of the modulation accuracy.

Response: <NR2> dB

Example: FETC:CDMA:MACC:CDE:QPE?

FETC:CDMA:MEAS1:MACC:CDE:QPE?

FETCh:CDMA[:MEAS<i>]:MACCuracy:QOOFfset?

Description: Queries the QPSK origin offset of the modulation accuracy.

Response: <NR2> %

Example: FETC:CDMA:MACC:QOOF?

FETC:CDMA:MEAS1:MACC:QOOF?

FETCh:CDMA[:MEAS<i>]:MACCuracy:RFACtor?

Description: Queries the rho factor of the modulation accuracy.

Response: <NR1>

Example: FETC:CDMA:MACC:RFAC?

FETC:CDMA:MEAS1:MACC:RFAC?

FETCh:CDMA[:MEAS<i>]:POWer:CHANnel?

Description: Queries the channel power results of the CDMA measurement.

Response: <NRf>

Example: FETC:CDMA POW:CHAN?

FETC:CDMA:MEAS1:POW:CHAN?

FETCh:CDMA[:MEAS<i>]:QCONstellation?

Description: Queries the QPSK constellation results.

Response: <NR2> %

Example: FETC:CDMA:QCON?

FETC:CDMA:MEAS1:QCON?

FETCh:CDMA[:MEAS<i>]:SMASk:FPOints?

Description: Queries the failure points of the spectral mask.

Response: <NR1>

Example: FETC:CDMA SMAS:FPO?

FETC:CDMA:MEAS1:SMAS:FPO?

FETCh:CDMA[:MEAS<i>]:SMASk:LERRor?

Description: Queries the fail level error of the spectral mask.

Response: <NR2> dB

Example: FETC:CDMA SMAS:LERR?

FETC:CDMA:MEAS1:SMAS:LERR?

CONFigure commands

CONFigure
:CDMA
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ACPR
:MODE
:OFFSet
:CENTer
:LOWer<j>
:UPPer<j>
:ANALysis
:CMASk
:LENgth
:NQSYmbol
:RC
:THReshold
:BAND
:CHANnel

CONFigure:CDMA:MEAS<i>:ACPR:MODE

Description: Sets the mode of the adjacent channel power ratio.

Parameters: <CPD>

Valid values: AUTO | USER

Example: CONF:CDMA:MEAS1:ACPR AUTO

CONFigure:CDMA:MEAS<i>:ACPR:OFFSet:CENTer

Description: Sets the frequency offset for the center frequency of the adjacent channel power ratio.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:CDMA:MEAS1:ACPR:OFFS:CENT 5.00 KHz

CONFigure:CDMA:MEAS<i>:ACPR:OFFSet:LOWer<j>

Description: Sets the frequency offset for the lower level of the adjacent channel power ratio.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:CDMA:MEAS1:ACPR:OFFS:LOW1 -5.00 KHz

CONFigure:CDMA:MEAS<i>:ACPR:OFFSet:UPPer<j>

Description: Sets the frequency offset for the upper level of the adjacent channel power ratio.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:CDMA:MEAS1:ACPR:OFFS:UPP1 250.00 MHz

CONFigure:CDMA:MEAS<i>:ANALysis:CMASk

Description: Sets the code mask of the CDMA configuration.

Parameters: <NR1>

Valid values: 0 to FFFFFFFF

Example: CONF:CDMA:MEAS1:ANAL:CMAS 2A

CONFigure:CDMA:MEAS<i>:ANALysis:LENGth

Description: Sets the search length of the CDMA configuration.

Parameters: <NR2>

Valid values: Positive

Valid units: s | us | ms | ns

Example: CONF:CDMA:MEAS1:ANAL:LENG 2000.000 us

CONFigure:CDMA:MEAS<i>:ANALysis:NQSYmbol

Description: Sets the number of QPSK symbol of the CDMA configuration.

Parameters: <NR1>

Valid values: 1 to 10000

Example: CONF:CDMA:MEAS1:ANAL:NQSY 511

CONFigure:CDMA:MEAS<i>:ANALysis:RC

Description: Sets the radio configuration of the CDMA configuration.

Parameters: <CPD>

Valid values: RC1 | RC2 | RC3 | RC4

Example: CONF:CDMA:MEAS1:ANAL:RC RC3

CONFigure:CDMA:MEAS<i>:ANALysis:THReshold

Description: Sets the capture threshold of the CDMA configuration.

Parameters: <NR2>

Valid values: -60 to 60 dB

Example: CONF:CDMA:MEAS1:ANAL:THR -15.00 dB

CONFigure:CDMA:MEAS<i>:BAND

Description: Sets the band class of the CDMA configuration.

Parameters: <NR1>

Valid values: 0–12

Example: CONF:CDMA:MEAS1:BAND 5

CONFigure:CDMA:MEAS<i>:CHANnel

Description: Sets the channel of the CDMA configuration.

Parameters: <NR1>

Valid values: 0–2047

Example: CONF:CDMA:MEAS1:CHAN 111

TRACe commands

READ
:CDMA
[:MEASurement<i>]
:TRACe
:ACPR
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CDE
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CDP
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACe commands.

:CCONstellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:QCONstellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

Composite constellation results (trace)

The following commands return the composite constellation trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:CDMA[:MEAS<i>]:TRACe:CCONstellation:AVERage?

READ:CDMA[:MEAS<i>]:TRACe:CCONstellation[:CURRent]?

READ:CDMA[:MEAS<i>]:TRACe:CCONstellation:MAXimum?

READ:CDMA[:MEAS<i>]:TRACe:CCONstellation:MINimum?

FETCh:CDMA[:MEAS<i>]:TRACe:CCONstellation:AVERage?

FETCh:CDMA[:MEAS<i>]:TRACe:CCONstellation [:CURRent]?

FETCh:CDMA[:MEAS<i>]:TRACe:CCONstellation:MAXimum?

FETCh:CDMA[:MEAS<i>]:TRACe:CCONstellation:MINimum?

This trace contains I in the x axis and Q in the y axis.

Returned values: < I 1, Q 1>... <I n, Q n>

I range: -3 I to 3 I

Q range: -3 Q to 3 Q

Example: READ:CDMA:MEAS1:TRAC:CCON?

QPSK constellation results (trace)

The following commands return the QPSK constellation trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:CDMA[:MEAS<i>]:TRACe:QCONstellation:AVERage?

READ:CDMA[:MEAS<i>]:TRACe:QCONstellation[:CURRent]?

READ:CDMA[:MEAS<i>]:TRACe:QCONstellation:MAXimum?

READ:CDMA[:MEAS<i>]:TRACe:QCONstellation:MINimum?

FETCh:CDMA[:MEAS<i>]:TRACe:QCONstellation:AVERage?

FETCh:CDMA[:MEAS<i>]:TRACe:QCONstellation [:CURRent]?

FETCh:CDMA[:MEAS<i>]:TRACe:QCONstellation:MAXimum?

FETCh:CDMA[:MEAS<i>]:TRACe:QCONstellation:MINimum?

This trace contains I in the x axis and Q in the y axis.

Returned values: < I 1, Q 1>... <I n, Q n>

I range: -3 I to 3 I

Q range: -3 Q to 3 Q

Example: READ:CDMA:MEAS1:TRAC:QCON?

TRIGger commands

TRIGger
:CDMA
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:TYPE
:SOURce
:IMMediate
:EXTernal
:POLarity

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

EVDO REVERSE LINK COMMANDS

READ commands

READ
:EVDO
[:MEASurement<i>]
:ACPR?
:LEVel?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:OFFSet?
:CENTer?
:LOWer?<j>
:UPPer?<j>
:CCDF?
:CDE?
:CPVTime?
:MACCuracy
:EVM
:PEAK?
:RMS?<[CINDex]>
:FERRor?
:POWer
:AVERage?
:SMASk?
:FREQuency?
:STATus?
SPECtrum?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:CCONStellation?
:CDP?
:ASNumber?
:CPI?
:CPQ?
:POWer?<CTYPe>
:PPOWer?
:PRATio?<CTYPe>

:MACCuracy
:ASNumber?
:EVM
:MERRor?
:INDex
:PAYLoad?
:SUBPacket?
:MEPeak?
:PERRor
:PEAk?
:RMS
:RFACtor?
:POWer
:CHANnel?
:SMASk?
:FPOints?
:LEVel?
:OFFSet?

READ:EVDO[:MEAS<i>]:CCONstellation?

Description: Starts a new measurement and retrieves the composite constellation results.

Response: <NR2>

Example: READ:EVDO:CCON?

READ:EVDO:MEAS1:CCON?

READ:EVDO[:MEAS<i>]:CDP:ASNumber?

Description: Starts a new measurement and retrieves the analyzed slot number of the code domain power.

Parameters: None

Response: <NR1>

Example: READ:EVDO:CDP:ASN?

READ:EVDO:MEAS1:CDP:ASN?

READ:EVDO[:MEAS<i>]:CDP:CPI?

Description: Starts a new measurement and retrieves the CDE peak I of the code domain power.

Parameters: None

Response: <NR2>

Example: READ:EVDO:CDP:CPI?

READ:EVDO:MEAS1:CDP:CPI?

READ:EVDO[:MEAS<i>]:CDP:CPQ?

Description: Starts a new measurement and retrieves the CDE peak Q of the code domain power.

Parameters: None

Response: <NR2>

Example: READ:EVDO:CDP:CPQ?

READ:EVDO:MEAS1:CDP:CPQ?

READ:EVDO[:MEAS<i>]:CDP:POWer?<CTYPe>

Description: Starts a new measurement and retrieves the power of the code domain power for a given reverse channel.

Parameters: <CPD>

Valid values: ACK | AUX | DATA | DRC | DSC | RRI

Response: <NR2>

Example: READ:EVDO:CDP:POW?<DATA>

READ:EVDO:MEAS1:CDP:POW?<RRI>

READ:EVDO[:MEAS<i>]:CDP:PPOWer?

Description: Starts a new measurement and retrieves the pilot power of the code domain power.

Parameters: None

Response: <NR2>

Example: READ:EVDO:CDP:PPOW?

READ:EVDO:MEAS1:CDP:PPOW?

READ:EVDO[:MEAS<i>]:CDP:PRATio?<CTYPe>

Description: Starts a new measurement and retrieves the pilot ratio of the code domain power for a given reverse channel.

Parameters: <CPD>

Valid values: ACK | AUX | DATA | DRC | DSC | RRI

Response: <NR2>

Example: READ:EVDO:CDP:PRAT?<DRC>

READ:EVDO:MEAS1:CDP:PRAT?<ACK>

READ:EVDO[:MEAS<i>]:MACCuracy:ASNumber?

Description: Starts a new measurement and retrieves the analyzed slot number of the modulation accuracy.

Response: <NR1>

Example: READ:EVDO:MACC:ASN?

READ:EVDO:MEAS1:MACC:ASN?

READ:EVDO[:MEAS<i>]:MACCuracy:EVM:RMS:MERRor?

Description: Starts a new measurement and retrieves the magnitude error RMS of the modulation accuracy.

Response: <NR2>dB

Example: READ:EVDO:MACC:EVM:RMS:MERR?

READ:EVDO:MEAS1:MACC:EVM:RMS:MERR?

READ:EVDO[:MEAS<i>]:MACCuracy:INDex:PAYLoad?

Description: Starts a new measurement and retrieves the payload index of the modulation accuracy.

Response: <NR1>

Example: READ:EVDO:MACC:IND:PAYL?

READ:EVDO:MEAS1:MACC:IND:PAYL?

READ:EVDO[:MEAS<i>]:MACCuracy:INDex:SUBPacket?

Description: Starts a new measurement and retrieves the sub-packet index of the modulation accuracy.

Response: <NR1>

Example: READ:EVDO:MACC:IND:SUBP?

READ:EVDO:MEAS1:MACC:IND:SUBP?

READ:EVDO[:MEAS<i>]:MACCuracy:MEPeak?

Description: Starts a new measurement and retrieves the magnitude error peak of the modulation accuracy.

Parameters: None

Response: <NR2>dB

Example: READ:EVDO:MACC:MEP?

READ:EVDO:MEAS1:MACC:MEP?

READ:EVDO[:MEAS<i>]:MACCuracy:PERRor:PEAK?

Description: Starts a new measurement and retrieves the phase error peak of the modulation accuracy.

Response: <NR2>degree

Example: READ:EVDO:MACC:PERR:PEAK?

READ:EVDO:MEAS1:MACC:PERR:PEAK?

READ:EVDO[:MEAS<i>]:MACCuracy:PERRor:RMS?

Description: Starts a new measurement and retrieves the phase error RMS of the modulation accuracy.

Response: <NR2>degree

Example: READ:EVDO:MACC:PERR:RMS?

READ:EVDO:MEAS1:MACC:PERR:RMS?

READ:EVDO[:MEAS<i>]:MACCuracy:RFACtor?

Description: Starts a new measurement and retrieves the rho factor of the modulation accuracy.

Parameters: None

Response: <NR1>

Example: READ:EVDO:MACC:RFAC?

READ:EVDO:MEAS1:MACC:RFAC?

READ:EVDO[:MEAS<i>]:POWer:CHANnel?

Description: Starts a new measurement and retrieves the channel power.

Parameters: None

Response: <NR2>dBm

Example: READ:EVDO:POW:CHAN?

READ:EVDO:MEAS1:POW:CHAN?

READ:EVDO[:MEAS<i>]:SMASk:FPOints?

Description: Starts a new measurement and retrieves the failure points of the spectral mask.

Parameters: None

Response: <NR1>

Example: READ:EVDO:SMAS:FPO?

READ:EVDO:MEAS1:SMAS:FPO?

READ:EVDO[:MEAS<i>]:SMASk:LEVel:OFFSet?

Description: Starts a new measurement and retrieves the offset level of the spectral mask.

Parameters: None

Response: <NR2>dB

Example: READ:EVDO:SMAS:LEV:OFFS?

READ:EVDO:MEAS1:SMAS:LEV:OFFS?

FETCh commands

```
FETCh
    :EVDO
        [:MEASurement<i>]
            :ACPR?
                :LEVel?
                    :CENTer?
                    :LOWer?<j>
                    :UPPer?<j>
                :OFFSet?
                    :CENTer?
                    :LOWer?<j>
                    :UPPer?<j>
            :CCDF?
            :CDE?
            :CPVTime?
            :MACCuracy
                :EVM
                    :MERRor?
                    :PEAK?
                    :RMS?<[CINDex]>
                :FERRor?
            :POWer
                :AVERage?
            :SMASk?
                :FREQuency?
                :STATus?
            :SPECtrum?
```

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

```
            :CCONStellation?
            :CDP?
                :ASNumber?
                :CPI?
                :CPQ?
                :POWer?<CTYPe>
                :PPOWer?
                :PRATio?<CTYPe>
            :MACCuracy
                :ASNumber?
                :EVM
                    :RMS
                        MERRor?
                :INDex
                    :PAYLoad?
                    :SUBPacket?
                :MEPeak?
```

:PERRor
:PEAK?
:RMS?
:RFACtor?
:POWer
:CHANnel?
:SMASk?
:FPOints?
:LEVel?
:OFFSet?

FETCh:EVDO[:MEAS<i>]:CCONstellation?

Description: Queries the composite constellation results.

Response: <NR2>

Example: FETC:EVDO:CCON?

FETC:EVDO:MEAS1:CCON?

FETCh:EVDO[:MEAS<i>]:CDP:ASNumber?

Description: Starts a new measurement and analyzed slot number of code domain power.

Parameters: None

Response: <NR1>

Example: FETC:EVDO:CDP:ASN?

FETC:EVDO:MEAS1:CDP:ASN?

FETCh:EVDO[:MEAS<i>]:CDP:CPI?

Description: Queries the CDE peak I of code domain power.

Parameters: None

Response: <NR2>

Example: FETC:EVDO:CDP:CPI?

FETC:EVDO:MEAS1:CDP:CPI?

FETCh:EVDO[:MEAS<i>]:CDP:CPQ?

Description: Queries the CDE peak Q of code domain power.

Parameters: None

Response: <NR2>

Example: FETC:EVDO:CDP:CPQ?

FETC:EVDO:MEAS1:CDP:CPQ?

FETCh:EVDO[:MEAS<i>]:CDP:POWer?<CTYPe>

Description: Queries the power of code domain power.

Parameters: <CPD>

Valid values: ACK | AUX | DATA | DRC | DSC | RRI

Response: <NR2>

Example: FETC:EVDO:CDP:POW? ACK

FETC:EVDO:MEAS1:CDP:POW? ACK

FETCh:EVDO[:MEAS<i>]:CDP:PPOWer?

Description: Queries the pilot power of code domain power.

Parameters: None

Response: <NR2>

Example: FETC:EVDO:CDP:PPOW?

FETC:EVDO:MEAS1:CDP:PPOW?

FETCh:EVDO[:MEAS<i>]:CDP:PRATio?<CTYPe>

Description: Queries the pilot ratio of code domain power.

Parameters: <CPD>

Valid values: ACK | AUX | DATA | DRC | DSC | RRI

Response: <NR2>

Example: FETC:EVDO:CDP:PRAT? RRI

FETC:EVDO:MEAS1:CDP:PRAT? DATA

FETCh:EVDO[:MEAS<i>]:MACCuracy:ASNumber?

Description: Queries analyzed slot number of the modulation accuracy.

Parameters: None

Response: <NR1>

Example: FETC:EVDO:MACC:ASN?

FETC:EVDO:MEAS1:MACC:ASN?

FETCh:EVDO[:MEAS<i>]:MACCuracy:EVM:RMS:MERRor?

Description: Queries the magnitude error RMS of the modulation accuracy.

Parameters: None

Response: <NR2>dB

Example: FETC:EVDO:MACC:EVM:RMS:MERR?

FETC:EVDO:MEAS1:MACC:EVM:RMS:MERR?

FETCh:EVDO[:MEAS<i>]:MACCuracy:INDex:PAYLoad?

Description: Queries the payload index of the modulation accuracy.

Parameters: None

Response: <NR1>

Example: FETC:EVDO:MACC:IND:PAYL?

FETC:EVDO:MEAS1:MACC:IND:PAYL?

FETCh:EVDO[:MEAS<i>]:MACCuracy:INDex:SUBPacket?

Description: Queries sub-packet index of the modulation accuracy.

Parameters: None

Response: <NR1>

Example: FETC:EVDO:MACC:IND:SUBP?

FETC:EVDO:MEAS1:MACC:IND:SUBP?

FETCh:EVDO[:MEAS<i>]:MACCuracy:MEPeak?

Description: Queries the magnitude error peak of the modulation accuracy.

Parameters: None

Response: <NR2>dB

Example: FETC:EVDO:MACC:MEP?

FETC:EVDO:MEAS1:MACC:MEP?

FETCh:EVDO[:MEAS<i>]:MACCuracy:PERRor:PEAK?

Description: Queries the phase error peak of the modulation accuracy.

Parameters: None

Response: <NR2>degree

Example: FETC:EVDO:MACC:PERR:PEAK?

FETC:EVDO:MEAS1:MACC:PERR:PEAK?

FETCh:EVDO[:MEAS<i>]:MACCuracy:PERRor:RMS?

Description: Queries the phase error RMS of the modulation accuracy.

Parameters: None

Response: <NR2>degree

Example: FETC:EVDO:MACC:PERR:RMS?

FETC:EVDO:MEAS1:MACC:PERR:RMS?

FETCh:EVDO[:MEAS<i>]:MACCuracy:RFACtor?

Description: Queries the rho factor of the modulation accuracy.

Parameters: None

Response: <NR1>

Example: FETC:EVDO:MACC:RFAC?

FETC:EVDO:MEAS1:MACC:RFAC?

FETCh:EVDO[:MEAS<i>]:POWer:CHANnel?

Description: Queries the channel power.

Parameters: None

Response: <NR2>dBm

Example: FETC:EVDO:POW:CHAN?

FETC:EVDO:MEAS1:POW:CHAN?

FETCh:EVDO[:MEAS<i>]:SMASk:FPOints?

Description: Queries the failure points of the spectral mask.

Parameters: None

Response: <NR1>

Example: FETC:EVDO:SMAS:FPO?

FETC:EVDO:MEAS1:SMAS:FPO?

FETCh:EVDO[:MEAS<i>]:SMASk:LEVel:OFFSet?

Description: Queries the offset level of the spectral mask.

Parameters: None

Response: <NR2>dB

Example: FETC:EVDO:SMAS:LEV:OFFS?

FETC:EVDO:MEAS1:SMAS:LEV:OFFS?

CONFigure commands

CONFigure
:EVDO
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ANALysis
:CHANnel
:THReshold
:LENgth
:MASk
:IC
:QC
:MODE
:SLOT
:CARRiers
[:COUnt]
:OFFset<i>
:SPACing
:STATe<i>
:SYSTem
:PLSubtype
:CSTRucture
:RDMode
:MODulation

CONFigure:EVDO:MEAS<i>:ANALysis:CHANnel:THReshold

Description: Sets the channel detect threshold of the system configuration.

Parameters: <NR2>dBc

Example: CONF:EVDO:MEAS1:ANAL:CHAN:THR -25.00dBc

CONFigure:EVDO:MEAS<i>:ANALysis:LENGth

Description: Sets the search length of the system configuration.

Parameters: <NR2>

Valid units: s | ms | us | ns

Example: CONF:EVDO:MEAS1:ANAL:LENG 30000.000us

CONFigure:EVDO:MEAS<i>:ANALysis:MASK:IC

Description: Sets the code mask I (in hex) of the system configuration.

Parameters: <CPD>

Example: CONF:EVDO:MEAS1:ANAL:MASK:IC A

CONFigure:EVDO:MEAS<i>:ANALysis:MASK:QC

Description: Sets the code mask Q (in hex) of the system configuration.

Parameters: <CPD>

Example: CONF:EVDO:MEAS1:ANAL:MASK:QC B

CONFigure:EVDO:MEAS<i>:ANALysis:MODE

Description: Sets the analysis mode of the system configuration.

Parameters: <CPD>

Valid values: RANDom | SPECific

Example: CONF:EVDO:MEAS1:ANAL:MODE RAND

CONFigure:EVDO:MEAS<i>:ANALysis:SLOT

Description: Sets the slot number of the system configuration.

Parameters: <NR1>

Valid values: 0 to 15

Example: CONF:EVDO:MEAS1:ANAL:SLOT 2

CONFigure:EVDO:MEAS<i>:CARRiers:COUNt

Description: Sets the modulation type of the Rev B carrier configuration.

Parameters: <NR1>

Valid values: 1 to 99

Example: CONF:EVDO:MEAS1:CARR:COUN 3

CONFigure:EVDO:MEAS<i>:CARRiers:OFFSet<i>

Description: Sets the carrier offset of the Rev B carrier configuration.

Parameters: <NR2>

Valid values: Hz | KHz | MHz | GHz

Example: CONF:EVDO:MEAS1:CARR:OFFS 3 1.230000MHz

CONFigure:EVDO:MEAS<i>:CARRiers:SPACing

Description: Sets the default carrier spacing of the Rev B carrier configuration.

Parameters: <NR2>MHz

Valid values: 1.23 MHz | 1.25 MHz

Example: CONF:EVDO:MEAS1:CARR:SPAC 1.25 MHz

CONFigure:EVDO:MEAS<i>:CARRiers:STATe<i>

Description: Sets the measurement of the Rev B carrier configuration.

Parameters: <CPD>

Valid values: ENABled | DISabled

Example: CONF:EVDO:MEAS1:CARR:STAT1 ENAB

CONFigure:EVDO:MEAS<i>:SYSTem:PLSubtype

Description: Sets the physical layer subtype of the system configuration.

Parameters: <CPD>

Valid values: SUBType 0 | SUBType 1 | SUBType 2 | SUBType 3

Example: CONF:EVDO:MEAS1:SYST:PLS SUBT0

CONFigure:EVDO:MEAS<i>:SYSTem:PLSubtype:CSTRucture

Description: Sets the channel structure of the system configuration.

Parameters: <CPD>

Valid values: NFBMultiplexing

Example: CONF:EVDO:MEAS1:SYST:PLS:CSTR NFBM

CONFigure:EVDO:MEAS<i>:SYSTem:RDMode

Description: Sets the RRI decode mode of the system configuration.

Parameters: <CPD>

Valid values: AUTO | MANual

Example: CONF:EVDO:MEAS1:SYST:RDM MAN

CONFigure:EVDO:MEAS<i>:SYSTem:RDMode:MODulation

Description: Sets modulation type of the system configuration.

Parameters: <CPD>

Valid values: B4 | Q4 | Q2 | Q4Q2 | E4E2 | NDEFined

Example: CONF:EVDO:MEAS1:SYST:RDM:MOD B4

TRACe commands

READ
:EVDO
[:MEASurement<i>]
:TRACe
:ACPR
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CCDF
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CDE
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CDP
:AVERage?<SCARrier>
[:CURRent]?<SCARrier>
:MAXimum?<SCARrier>
:MINimum?<SCARrier>
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SMASk
:AVERage?
[:CURRent]?
:MAXimum?
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:CCONstellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

Composite constellation results (trace)

The following commands return the composite constellation trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:EVDO[:MEAS<i>]:TRACe:CCONstellation:AVERage?

READ:EVDO[:MEAS<i>]:TRACe:CCONstellation[:CURRent]?

READ:EVDO[:MEAS<i>]:TRACe:CCONstellation:MAXimum?

READ:EVDO[:MEAS<i>]:TRACe:CCONstellation:MINimum?

FETCh:EVDO[:MEAS<i>]:TRACe:CCONstellation:AVERage?

FETCh:EVDO[:MEAS<i>]:TRACe:CCONstellation [:CURRent]?

FETCh:EVDO[:MEAS<i>]:TRACe:CCONstellation:MAXimum?

FETCh:EVDO[:MEAS<i>]:TRACe:CCONstellation:MINimum?

This trace contains I in the x axis and Q in the y axis.

Returned values: < I 1, Q 1>... <I n, Q n>

I range: -3 I to 3 I

Q range: -3 Q to 3 Q

Example: READ:EVDO:MEAS1:TRAC:CCON?

TRIGger commands

TRIGger
:EVDO
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

WIRELESS LAN COMMANDS

READ commands

READ
:WLAN
[:MEASurement<i>]
:ACP
:CHANnel?
:POWer?
:MACCuracy
:EVM
:PEAK?
:RMS?
:FERRor?
:SMASk
:FREQuency?
:LEVel?
:STATus?
:OBW?
:POWer
:AVERage?
:PEAK?
:PSTatus?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:MACCuracy
:CLEak?
:EVM
:CARrier
:DATA?
:PILot?
:HT
:FORMat?
:MCS?
:IQERror
:GIMBalance?
:SKEW
:MODulation?
:PSDU
:BITS?
:SYMBols?
:RATE?

```
        :RCE:
            :RMS?
            :CARrier
                :DATA?
                :PILot?
        :SCERror?
        :SYSTem?
    :POWer
        :BURSt
            :LENGth?
            :POSition?
        :FALLing
            :EDGE
                :STATus
                :TIME?
        :RISing
            :EDGE
                :STATus
                :TIME?
    :SFLatness
        :LOWer?
        :OVERall?
        :UPPer?
```

READ:WLAN[:MEAS<i>]:MACCuracy:CLEak?

Description: Starts a new measurement and retrieves the carrier leak of modulation accuracy.

Response: <NR2> dB

Example: READ:WLAN:MACC:CLE?

READ:WLAN:MEAS1:MACC:CLE?

READ:WLAN[:MEAS<i>]:MACCuracy:EVM:CARRier:DATA?

Description: Starts a new measurement and retrieves the EVM data carrier of modulation accuracy.

Response: <NR2> %

Example: READ:WLAN:MACC:EVM:CARR:DATA?

READ:WLAN:MEAS1:MACC:EVM:CARR:DATA?

READ:WLAN[:MEAS<i>]:MACCuracy:EVM:CARRier:PILot?

Description: Starts a new measurement and retrieves the EVM pilot carrier of modulation accuracy.

Response: <NR2> %

Example: READ:WLAN:MACC:EVM:CARR:PIL?

READ:WLAN:MEAS1:MACC:EVM:CARR:PIL?

READ:WLAN[:MEAS<i>]:MACCuracy:HT:FORMat?

Description: Starts a new measurement and retrieves the HT format of modulation accuracy.

Response: <CPD>

Valid values: MIXed | GREenfield

Example: READ:WLAN:MACC:HT:FORM?

READ:WLAN:MEAS1:MACC:HT:FORM?

READ:WLAN[:MEAS<i>]:MACCuracy:HT:MCS?

Description: Starts a new measurement and retrieves the HT MCS of modulation accuracy.

Response: <NR1>

Example: READ:WLAN:MACC:HT:MCS?

READ:WLAN:MEAS1:MACC:HT:MCS?

READ:WLAN[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Starts a new measurement and retrieves the IQ gain imbalance of modulation accuracy.

Response: <NR2> dB

Example: READ:WLAN:MACC:IQER:GIMB?

READ:WLAN:MEAS1:MACC:IQER:GIMB?

READ:WLAN[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Starts a new measurement and retrieves the IQ skew of modulation accuracy.

Response: <NR2> degree

Example: READ:WLAN:MACC:IQER:SKEW?

READ:WLAN:MEAS1:MACC:IQER:SKEW?

READ:WLAN[:MEAS<i>]:MACCuracy:MODulation?

Description: Starts a new measurement and retrieves the modulation type of modulation accuracy.

Response: <CPD>

Valid values: BPSK | QPSK | 16QAM | 64QAM

Example: READ:WLAN:MACC:MOD?

READ:WLAN:MEAS1:MACC:MOD?

READ:WLAN[:MEAS<i>]:MACCuracy:PSDU:BITS?

Description: Starts a new measurement and retrieves the number of PSDU bits of modulation accuracy.

Response: <NR1>

Example: READ:WLAN:MACC:PSDU:BITS?

READ:WLAN:MEAS1:MACC:PSDU:BITS?

READ:WLAN[:MEAS<i>]:MACCuracy:PSDU:SYMBols?

Description: Starts a new measurement and retrieves the number of PSDU symbols of modulation accuracy.

Response: <NR1>

Example: READ:WLAN:MACC:PSDU:SYMB?

READ:WLAN:MEAS1:MACC:PSDU:SYMB?

READ:WLAN[:MEAS<i>]:MACCuracy:RATE?

Description: Starts a new measurement and retrieves the data rate of modulation accuracy.

Response: <NR1> Mbps

Example: READ:WLAN:MACC:RATE?

READ:WLAN:MEAS1:MACC:RATE?

READ:WLAN[:MEAS<i>]:MACCuracy:RCE:RMS?

Description: Starts a new measurement and retrieves the RCE RMS of modulation accuracy.

Response: <NR2> dB

Example: READ:WLAN:MACC:RCE:RMS?

READ:WLAN:MEAS1:MACC:RCE:RMS?

READ:WLAN[:MEAS<i>]:MACCuracy:RCE:CARRier:DATA?

Description: Starts a new measurement and retrieves the RCE data carrier of modulation accuracy.

Response: <NR2> dB

Example: READ:WLAN:MACC:RCE:CARR:DATA?

READ:WLAN:MEAS1:MACC:RCE:CARR:DATA?

READ:WLAN[:MEAS<i>]:MACCuracy:RCE:CARRier:PILot?

Description: Starts a new measurement and retrieves the RCE pilot carrier of modulation accuracy.

Response: <NR2> dB

Example: READ:WLAN:MACC:RCE:CARR:PIL?

READ:WLAN:MEAS1:MACC:RCE:CARR:PIL?

READ:WLAN[:MEAS<i>]:MACCuracy:SCERror?

Description: Starts a new measurement and retrieves the symbol clock error of modulation accuracy.

Response: <NR2> ppm

Example: READ:WLAN:MACC:SCER?

READ:WLAN:MEAS1:MACC:SCER?

READ:WLAN[:MEAS<i>]:MACCuracy:SYSTem?

Description: Starts a new measurement and retrieves the system type of modulation accuracy.

Response: <CPD>

Valid values: OFDM | DSSS | DSOF

Example: READ:WLAN:MACC:SYST?

READ:WLAN:MEAS1:MACC:SYST?

READ:WLAN[:MEAS<i>]:POWer:BURSt:LENGth?

Description: Starts a new measurement and retrieves the burst length of power.

Response: <NR2> us

Example: READ:WLAN:POW:BURS:LENG?

READ:WLAN:MEAS1:POW:BURS:LENG?

READ:WLAN[:MEAS<i>]:POWer:BURSt:POSition?

Description: Starts a new measurement and retrieves the burst position of power.

Response: <NR2> us

Example: READ:WLAN:POW:BURS:POS?

READ:WLAN:MEAS1:POW:BURS:POS?

READ:WLAN[:MEAS<i>]:POWer:FALLing:EDGE:STATus?

Description: Starts a new measurement and retrieves the falling edge status of power.

Response: <Boolean>

Valid values: PASS | FAIL

Example: READ:WLAN:POW:FALL:EDGE:STAT?

READ:WLAN:MEAS1:POW:FALL:EDGE:STAT?

READ:WLAN[:MEAS<i>]:POWer:FALLing:EDGE:TIME?

Description: Starts a new measurement and retrieves the falling edge time of power.

Response: <NR2> us

Example: READ:WLAN:POW:FALL:EDGE:TIME?

READ:WLAN:MEAS1:POW:FALL:EDGE:TIME?

READ:WLAN[:MEAS<i>]:POWer:RISing:EDGE:STATus?

Description: Starts a new measurement and retrieves the rising edge status of power.

Response: <Boolean>

Example: READ:WLAN:POW:RIS:EDGE:STAT?

READ:WLAN:MEAS1:POW:RIS:EDGE:STAT?

READ:WLAN[:MEAS<i>]:POWer:RISing:EDGE:TIME?

Description: Starts a new measurement and retrieves the rising edge time of power.

Response: <NR2> us

Example: READ:WLAN:POW:RIS:EDGE:TIME?

READ:WLAN:MEAS1:POW:RIS:EDGE:TIME?

READ:WLAN[:MEAS<i>]:SFLatness:LOWer?

Description: Starts a new measurement and retrieves the lower spectral flatness.

Response: <Boolean>

Valid values: PASS | FAIL

Example: READ:WLAN:SFL:LOW?

READ:WLAN:MEAS1:SFL:LOW?

READ:WLAN[:MEAS<i>]:SFLatness:OVERall?

Description: Starts a new measurement and retrieves the overall spectral flatness.

Response: <Boolean>

Valid values: PASS | FAIL

Example: READ:WLAN:SFL:OVER?

READ:WLAN:MEAS1:SFL:OVER?

READ:WLAN[:MEAS<i>]:SFLatness:UPPer?

Description: Starts a new measurement and retrieves the upper spectral flatness.

Response: <Boolean>

Valid values: PASS | FAIL

Example: READ:WLAN:SFL:UPP?

READ:WLAN:MEAS1:SFL:UPP?

FETCh commands

FETCh
:WLAN
[:MEASurement<i>]
:ACP
:CHANnel?
:POWer?
:OBW?
:POWer
:AVERage?
:PEAK?
:PSTatus?
:MACCuracy
:EVM
:PEAK?
:RMS?
:FERRor?
:SMASk
:FREQuency?
:LEVel?
:STATus?

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

:MACCuracy
:CLEak?
:EVM
:CARRier
:DATA?
:PILot?
:HT
:FORMat?
:MCS?
:IQERror
:GIMBalance?
:SKEW?
:MODulation?
:PSDU
:BITS?
:SYMBols?
:RATE?
:RCE
RMS?
:CARRier
:DATA?
:PILot?
:SCERror?
:SYSTem?

```
:POWer
    :BURSt
        :LENGth?
        :POSition?
    :FALLing
        :EDGe
            :STATus?
            :TIME?
    :RISing
        :EDGE
            :STATus?
            :TIME?
:SFLatness
    :LOWer?
    :OVERall?
    :UPPer?
```

FETCh:WLAN[:MEAS<i>]:MACCuracy:CLEak?

Description: Queries the carrier leak of modulation accuracy.

Response: <NR2> dB

Example: FETC:WLAN:MACC:CLE?

FETC:WLAN:MEAS1:MACC:CLE?

FETCh:WLAN[:MEAS<i>]:MACCuracy:EVM:CARRier:DATA?

Description: Queries the EVM data carrier of modulation accuracy.

Response: <NR2> %

Example: FETC:WLAN:MACC:EVM:CARR:DATA?

FETC:WLAN:MEAS1:MACC:EVM:CARR:DATA?

FETCh:WLAN[:MEAS<i>]:MACCuracy:EVM:CARRier:PILot?

Description: Queries the EVM pilot carrier of modulation accuracy.

Response: <NR2> %

Example: FETC:WLAN:MACC:EVM:CARR:PIL?

FETC:WLAN:MEAS1:MACC:EVM:CARR:PIL?

FETCh:WLAN[:MEAS<i>]:MACCuracy:HT:FORMat?

Description: Queries the HT format of modulation accuracy.

Response: <CPD>

Valid values: MIXed | GREenfield

Example: FETC:WLAN:MACC:HT:FORM?

FETC:WLAN:MEAS1:MACC:HT:FORM?

FETCh:WLAN[:MEAS<i>]:MACCuracy:HT:MCS?

Description: Queries the HT MCS of modulation accuracy.

Response: <NR1>

Example: FETC:WLAN:MACC:HT:MCS?

FETC:WLAN:MEAS1:MACC:HT:MCS?

FETCh:WLAN[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Queries the IQ gain imbalance of modulation accuracy.

Response: <NR2> dB

Example: FETC:WLAN:MACC:IQER:GIMB?

FETC:WLAN:MEAS1:MACC:IQER:GIMB?

FETCh:WLAN[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Queries the IQ skew of modulation accuracy.

Response: <NR2> degree

Example: FETC:WLAN:MACC:IQER:SKEW?

FETC:WLAN:MEAS1:MACC:IQSK?

FETCh:WLAN[:MEAS<i>]:MACCuracy:MODulation?

Description: Queries the modulation type of modulation accuracy.

Response: <CPD>

Valid values: BPSK | QPSK | 16QAM | 64QAM

Example: FETC:WLAN:MACC:MOD?

FETC:WLAN:MEAS1:MACC:MOD?

FETCh:WLAN[:MEAS<i>]:MACCuracy:PSDU:BITS?

Description: Queries the number of PSDU bits of modulation accuracy.

Response: <NR1>

Example: FETC:WLAN:MACC:PSDU:BITS?

FETC:WLAN:MEAS1:MACC:PSDU:BITS?

FETCh:WLAN[:MEAS<i>]:MACCuracy:PSDU:SYMBols?

Description: Queries the number of PSDU symbols of modulation accuracy.

Response: <NR1>

Example: FETC:WLAN:MACC:PSDU:SYMB?

FETC:WLAN:MEAS1:MACC:PSDU:SYMB?

FETCh:WLAN[:MEAS<i>]:MACCuracy:RATE?

Description: Queries the data rate of modulation accuracy.

Response: <NR1> Mbps

Example: FETC:WLAN:MACC:RATE?

FETC:WLAN:MEAS1:MACC:RATE?

FETCh:WLAN[:MEAS<i>]:MACCuracy:RCE:RMS?

Description: Queries the RCE RMS of modulation accuracy.

Response: <NR2> dB

Example: FETC:WLAN:MACC:RCE:RMS?

FETC:WLAN:MEAS1:MACC:RCE:RMS?

FETCh:WLAN[:MEAS<i>]:MACCuracy:RCE:CARRier:DATA?

Description: Queries the RCE data carrier of modulation accuracy.

Response: <NR2> dB

Example: FETC:WLAN:MACC:RCE:CARR:DATA?

FETC:WLAN:MEAS1:MACC:RCE:CARR:DATA?

FETCh:WLAN[:MEAS<i>]:MACCuracy:RCE:CARRier:PILot?

Description: Queries the RCE pilot carrier of modulation accuracy.

Response: <NR2> dB

Example: FETC:WLAN:MACC:RCE:CARR:PIL?

FETC:WLAN:MEAS1:MACC:RCE:CARR:PIL?

FETCh:WLAN[:MEAS<i>]:MACCuracy:SCERror?

Description: Queries the symbol clock error of modulation accuracy.

Response: <NR2> ppm

Example: FETC:WLAN:MACC:SCER?

FETC:WLAN:MEAS1:MACC:SCER?

FETCh:WLAN[:MEAS<i>]:MACCuracy:SYSTem?

Description: Queries the system type of modulation accuracy.

Response: <CPD>

Valid values: OFDM | DSSS | DSOF

Example: FETC:WLAN:MACC:SYST?

FETC:WLAN:MEAS1:MACC:SYST?

FETCh:WLAN[:MEAS<i>]:POWer:BURSt:LENGth?

Description: Queries the burst length of power.

Response: <NR2> us

Example: FETC:WLAN:POW:BURS:LENG?

FETC:WLAN:MEAS1:POW:BURS:LENG?

FETCh:WLAN[:MEAS<i>]:POWer:BURSt:POSition?

Description: Queries the burst position of power.

Response: <NR2> us

Example FETC:WLAN:POW:BURS:POS?

FETC:WLAN:MEAS1:POW:BURS:POS?

FETCh:WLAN[:MEAS<i>]:POWer:FALLing:EDGE:STATus?

Description: Queries the falling edge status of power.

Response: <Boolean>

Valid values: PASS | FAIL

Example: FETC:WLAN:POW:FALL:EDGE:STAT?

FETC:WLAN:MEAS1:POW:FALL:EDGE:STAT?

FETCh:WLAN[:MEAS<i>]:POWer:FALLing:EDGE:TIME?

Description: Queries the falling edge time of power.

Response: <NR2> us

Example: FETC:WLAN:POW:FALL:EDGE:TIME?

FETC:WLAN:MEAS1:POW:FALL:EDGE:TIME?

FETCh:WLAN[:MEAS<i>]:POWer:RISing:EDGE:STATus?

Description: Queries the rising edge status of power.

Response: <Boolean>

Example: FETC:WLAN:POW:RIS:EDGE:STAT?

FETC:WLAN:MEAS1:POW:RIS:EDGE:STAT?

FETCh:WLAN[:MEAS<i>]:POWer:RISing:EDGE:TIME?

Description: Queries the rising edge time of power.

Response: <NR2> us

Example: FETC:WLAN:POW:RIS:EDGE:TIME?

FETC:WLAN:MEAS1:POW:RIS:EDGE:TIME?

FETCh:WLAN[:MEAS<i>]:SFLatness:LOWer?

Description: Queries the lower spectral flatness.

Response: <Boolean>

Valid values: PASS | FAIL

Example: FETC:WLAN:SFL:LOW?

FETC:WLAN:MEAS1:SFL:LOW?

FETCh:WLAN[:MEAS<i>]:SFLatness:OVERall?

Description: Queries the overall spectral flatness.

Response: <Boolean>

Valid values: PASS | FAIL

Example: FETC:WLAN:SFL:OVER?

FETC:WLAN:MEAS1:SFL:OVER?

FETCh:WLAN[:MEAS<i>]:SFLatness:UPPer?

Description: Queries the upper spectral flatness.

Response: <Boolean>

Valid values: PASS | FAIL

Example: FETC:WLAN:SFL:UPP?

FETC:WLAN:MEAS1:SFL:UPP?

CONFigure commands

CONFigure
:WLAN
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ANALysis
:BURSt
:CDELay
:FEDGe
:THReshold
:PROFile
:REDGe
:THReshold
:TIME
:INTegration
:MOFF
:MON
:PRETrigger
:SKIP
:LENGth
:MODE
:SMODe
:SFLatness
:SMTYpe
:USER
:CSNap
:LIMit
:LOWer
:ADD
:CARRier
:INSert
:REMove
:UPPer
:ADD
:CARRier
:INSert
:REMove
:PSNap

:SMASK
:TYpe
:USER
:ADD **:FREQuency**
:INSert **:LEVel**
:REMove **:SYSTem**
:BWIDth
:OFFSet
:TRAcking
:AMPLitude
:PHASe
:TIME

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:CDELay

Description: Sets the comparator delay of the wireless LAN burst configuration.

Parameters: <NR1>

Example: CONF:WLAN:MEAS1:ANAL:BURS:CDEL 100

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:FEDGe:THReshold

Description: Sets the falling edge threshold of the wireless LAN burst configuration.

Parameters: <NR2> dB

Example: CONF:WLAN:MEAS1:ANAL:BURS:FEDG:THR 15.00 dB

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:PROFile

Description: Sets the burst profile type of the wireless LAN system configuration.

Parameters: <CPD>

Valid values: PEAK | AVERage

Example: CONF:WLAN:MEAS1:ANAL:BURS:PROF PEAK

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:REDGe:THReshold

Description: Sets the rising edge threshold of the wireless LAN burst configuration.

Parameters: <NR2> dB

Example: CONF:WLAN:MEAS1:ANAL:BURS:REDG:THR 15.00 dB

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:TIME:INTegration

Description: Sets the integration time of the wireless LAN burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:WLAN:MEAS1:ANAL:BURS:TIME:INT 0.200 us

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:TIME:MOFF

Description: Sets the minimum off time of the wireless LAN burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:WLAN:MEAS1:ANAL:BURS:TIME:MOFF 20.000 us

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:TIME:MON

Description: Sets the minimum on time of the wireless LAN burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:WLAN:MEAS1:ANAL:BURS:TIME:MON 20.000 us

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:TIME:PRETrigger

Description: Sets the pre-trigger time of the wireless LAN burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:WLAN:MEAS1:ANAL:BURS:TIME:PRET 1.000 us

CONFigure:WLAN:MEAS<i>:ANALysis:BURSt:TIME:INTegration:SKIP

Description: Sets the integration skip time of the wireless LAN burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:WLAN:MEAS1:ANAL:BURS:TIME:INT:SKIP 0.150 us

CONFigure:WLAN:MEAS<i>:ANALysis:LENGth

Description: Sets the search length of the wireless LAN system configuration.

Parameters: <NR2>

Valid units: us | ns | s | ms

Example: CONF:WLAN:MEAS1:ANAL:LENG 10000.000 us

CONFigure:WLAN:MEAS<i>:ANALysis:MODE

Description: Sets the analysis mode of the wireless LAN system configuration.

Parameters: <CPD>

Valid values: A8ABg | 8A | 8B | 8NHT | 8NNHt

Example: CONF:WLAN:MEAS1:ANAL:MODE 8NHT

CONFigure:WLAN:MEAS<i>:ANALysis:SMODe

Description: Sets the spectrum analysis mode of the wireless LAN system configuration.

Parameters: <CPD>

Valid values: BURSt | AIQData

Example: CONF:WLAN:MEAS1:ANAL:SMOD BURS

CONFigure:WLAN:MEAS<i>:SFLatness:SMTYpe

Description: Sets the spectral mask type of the spectral flatness configuration.

Parameters: <Boolean>

Valid values: UDEFined | PDEFined

Example: CONF:WLAN:MEAS1:SFL:SMTY UDEF

CONFigure:WLAN:MEAS<i>:SFLatness:USER

Description: Sets the carrier snap of the user mask.

Parameters: <NR1>

Example: CONF:WLAN:MEAS1:SFL:USER:CSN 2

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:LOWer

Description: Sets the limit of the spectral flatness lower limits.

Parameters: <NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:LOW -15 dB

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:LOWer :ADD<CARRier, LIMit>

Description: Adds one record for carrier and limit under the spectral flatness lower limits.

Parameters: CARRier<NR1>, LIMit<NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:LOW:ADD<1, -5>

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:LOWer:CARRier

Description: Queries the carrier of the spectral flatness lower limits.

Parameters: <NR1>

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:LOW:CARR 12

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:LOWer :INSert<CARRier, LIMit>

Description: Inserts one record for carrier and limit under the spectral flatness lower limits.

Parameters: CARRier<NR1>, LIMit<NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:LOW:INS

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:LOWer :REMove<CARRier, LIMit>

Description: Removes one record for carrier and limit from the spectral flatness upper limits.

Parameters: CARRier<NR1>, LIMit<NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:LOW:REM

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:UPPer

Description: Sets the limit of the spectral flatness upper limits.

Parameters: <NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:UPP 85 dB

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:UPPer :ADD<CARRier, LIMit>

Description: Adds one record for carrier and limit under the spectral flatness upper limits.

Parameters: CARRier<NR1>, LIMit<NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:UPP:ADD<5,10>

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:UPPer:CARRier

Description: Sets the carrier of the spectral flatness upper limits.

Parameters: <NR1>

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:UPP:CARR 10

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:UPPer :INSert<CARRier, LIMit>

Description: Inserts one record for carrier and limit under the spectral flatness upper limits.

Parameters: CARRier<NR1>, LIMit<NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:UPP:INS<1, -20>

CONFigure:WLAN:MEAS<i>:SFLatness:USER:LIMit:UPPer :REMove<CARRier, LIMit>

Description: Removes one record for carrier and limit from the spectral flatness upper limits.

Parameters: CARRier<NR1>, LIMit<NR1> dB

Example: CONF:WLAN:MEAS1:SFL:USER:LIM:UPP:REM

CONFigure:WLAN:MEAS<i>:SFLatness:USER:PSNap

Description: Sets the power snap of the user mask.

Parameters: <NR2> dB

Example: CONF:WLAN:MEAS1:SFL:USER:PSN 20.20 dB

CONFigure:WLAN:MEAS<i>:SMASk:TYPE

Description: Sets the spectral mask type of the spectral mask configuration.

Parameters: <CPD>

Valid values: 8A | 8B | 8N | USER

Example: CONF:WLAN:MEAS1:SMAS:TYPE 8A

CONFigure:WLAN:MEAS<i>:SMASk:USER:FREQuency

Description: Sets the spectral mask frequency of the spectral mask configuration.

Parameters: <NR1>Hz

Example: CONF:WLAN:MEAS1:SMAS:USER:FREQ 24 Hz

CONFigure:WLAN:MEAS<i>:SMASk:USER:LEVel

Description: Retrieves the spectral mask level of the spectral mask configuration

Parameters: <NR1>Hz

Example: CONF:WLAN:MEAS1:SMAS:USER:LEV?

CONFigure:WLAN:MEAS<i>:SYSTem:BWIDth

Description: Sets the channel bandwidth of the wireless LAN system configuration.

Parameters: <NR1> MHz

Valid values: 20 MHz | 40 MHz

Example: CONF:WLAN:MEAS1:SYST:BWID 20 MHz

CONFigure:WLAN:MEAS<i>:SYSTem:OFFSet

Description: Sets the channel offset of the wireless LAN system configuration.

Parameters: <CPD>

Valid values: NONE | LOWer | UPPer

Example: CONF:WLAN:MEAS1:SYST:OFFS LOW

CONFigure:WLAN:MEAS<i>:SYSTem:TRAcking:AMPLitude

Description: Sets the pilot amplitude tracking of the wireless LAN system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WLAN:MEAS1:SYST:TRA:AMPL ON

CONFigure:WLAN:MEAS<i>:SYSTem:TRAcking:PHASe

Description: Sets the pilot phase tracking of the wireless LAN system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WLAN:MEAS1:SYST:TRA:PHAS OFF

CONFigure:WLAN:MEAS<i>:SYSTem:TRAcking:TIME

Description: Sets the pilot time tracking of the wireless LAN system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WLAN:MEAS1:SYST:TRA:TIME OFF

TRACe commands

READ
:WLAN
[:MEASurement<i>]
:TRACe
:CCDF
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CONStellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:EVSYmbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PVTime
:AVERage?
[:CURRent]?
:MAXimum?
:SFLatness
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SMASk
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:CEVSymbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:EVCarrier
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

Clock error vs. symbol results (trace)

The following commands return the clock error vs. symbol trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:WLAN[:MEAS<i>]:TRACe:CEVSymbol:AVERage?

READ:WLAN[:MEAS<i>]:TRACe:CEVSymbol[:CURRent]?

READ:WLAN[:MEAS<i>]:TRACe:CEVSymbol:MAXimum?

READ:WLAN[:MEAS<i>]:TRACe:CEVSymbol:MINimum?

FETCh:WLAN[:MEAS<i>]:TRACe:CEVSymbol:AVERage?

FETCh:WLAN[:MEAS<i>]:TRACe:CEVSymbol [:CURRent]?

FETCh:WLAN[:MEAS<i>]:TRACe:CEVSymbol:MAXimum?

FETCh:WLAN[:MEAS<i>]:TRACe:CEVSymbol:MINimum?

The clock error vs. symbol trace contains symbol in the x axis and clock error (ppm) in the y axis.

Returned values: < symbol1, evm1>... < symbol n, evm n>

Symbol range: -1000 to 1000

EVM range: -25 ppm to 25 ppm

Example: READ:WLAN:MEAS1:TRAC:CEVS?

EVM vs. carrier results (trace)

The following commands return the EVM vs. carrier trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:WLAN[:MEAS<i>]:TRACe:EVCarrier:AVERage?

READ:WLAN[:MEAS<i>]:TRACe:EVCarrier[:CURRent]?

READ:WLAN[:MEAS<i>]:TRACe:EVCarrier:MAXimum?

READ:WLAN[:MEAS<i>]:TRACe:EVCarrier:MINimum?

FETCh:WLAN[:MEAS<i>]:TRACe:EVCarrier:AVERage?

FETCh:WLAN[:MEAS<i>]:TRACe:EVCarrier [:CURRent]?

FETCh:WLAN[:MEAS<i>]:TRACe:EVCarrier:MAXimum?

FETCh:WLAN[:MEAS<i>]:TRACe:EVCarrier:MINimum?

The EVM vs. Carrier trace contains subcarrier in the x axis and EVM (%) in the y axis.

Returned values: < subcarrierl1, evm1>... < subcarrier n, evm n>

Symbol range: -1000 to 1000

EVM range: 0 % to 10 %

Example: READ:WLAN:MEAS1:TRAC:EVC?

TRIGger commands

TRIGger
:WLAN
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

WIMAX COMMANDS

READ commands

READ
:WIMax
[:MEASurement<i>]
:MACCuracy
:FERRor?
:OBW?
:POWer
:AVERage?
:PEAK?
:SMASk
:FREQuency?
:LEVel?
:STATus?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:MACCuracy
:BURSt<i>
:EVM
:BID?
:CARRier
:DATA?
:PILot?
:UNModulated?
:ZID?
:RCE
:BID?
:CARRier
:DATA?
:PILot?
:UNModulated?
:RMS?
:ZID?
:CLEak?
:EVM
RMS
:FNUMber?
:IQERror
:GIMBalance?
:SKEW?
:SCERror?

:SFLatness
:ADJacent?
:LOWer?
:OVERall?
:UPPer?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:BID?

Description: Starts a new measurement and retrieves the burst ID for burst modulation accuracy of error vector modulation.

Parameters: <NR1>

Example: READ:WIM:MACC:BURS:EVM:BID?

READ:WIM:MEAS1:MACC:BURS:EVM:BID?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:CARRier:DATA?

Description: Starts a new measurement and retrieves the error vector magnitude data carrier of burst modulation accuracy.

Parameters: <NR2> %

Example: READ:WIM:MACC:BURS:EVM:CARR:DATA?

READ:WIM:MEAS1:MACC:BURS:EVM:CARR:DATA?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:CARRier:PILot?

Description: Starts a new measurement and retrieves the error vector magnitude pilot carrier of burst modulation accuracy.

Parameters: <NR2> %

Example: READ:WIM:MACC:BURS:EVM:CARR:PIL?

READ:WIM:MEAS1:MACC:BURS:EVM:CARR:PIL?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:CARRier:UNModulated?

Description: Starts a new measurement and retrieves the error vector magnitude unmodulated carrier of burst modulation accuracy.

Parameters: <NR2> %

Example: READ:WIM:MACC:BURS:EVM:CARR:UNM?

READ:WIM:MEAS1:MACC:BURS:EVM:CARR:UNM?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:ZID?

Description: Starts a new measurement and retrieves the zone ID for burst modulation accuracy of error vector modulation.

Parameters: <NR1>

Example: READ:WIM:MACC:BURS:EVM:ZID?

READ:WIM:MEAS1:MACC:BURS:EVM:ZID?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:BID?

Description: Starts a new measurement and retrieves the Burst ID for burst modulation accuracy of RCE

Parameters: <NR1>

Example: READ:WIM:MACC:BURS:RCE:BID?

READ:WIM:MEAS1:MACC:BURS:RCE:BID?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:CARRier:DATA?

Description: Starts a new measurement and retrieves the RCE data carrier of burst modulation accuracy.

Parameters: <NR2> dB

Example: READ:WIM:MACC:BURS:RCE:CARR:DATA?

READ:WIM:MEAS1:MACC:BURS:RCE:CARR:DATA?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:CARRier:PILot?

Description: Starts a new measurement and retrieves the RCE pilot carrier of burst modulation accuracy.

Parameters: <NR2> dB

Example: READ:WIM:MACC:BURS:RCE:CARR:PIL?

READ:WIM:MEAS1:MACC:BURS:RCE:CARR:PIL?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:CARRier:UNModulated?

Description: Starts a new measurement and retrieves the RCE unmodulated carrier of burst modulation accuracy.

Parameters: <NR2> dB

Example: READ:WIM:MACC:BURS:RCE:CARR:UNM?

READ:WIM:MEAS1:MACC:BURS:RCE:CARR:UNM?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:RMS?

Description: Starts a new measurement and retrieves the RCE RMS of burst modulation accuracy.

Parameters: <NR2> dB

Example: READ:WIM:MACC:BURS:RCE:RMS?

READ:WIM:MEAS1:MACC:BURS:RCE:RMS?

READ:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:ZID?

Description: Starts a new measurement and retrieves the zone ID for burst modulation accuracy of RCE.

Parameters: <NR1>

Example: READ:WIM:MACC:BURS:RCE:ZID?

READ:WIM:MEAS1:MACC:BURS:RCE:ZID?

READ:WIMax[:MEAS<i>]:MACCuracy:CLEak?

Description: Starts a new measurement and retrieves the carrier leak of modulation accuracy.

Parameters: <NR2> dB

Example: READ:WIM:MACC:CLE?

READ:WIM:MEAS1:MACC:CLE?

READ:WIMax[:MEAS<i>]:MACCuracy:EVM:RMS?

Description: Starts a new measurement and retrieves the error vector modulation RMS of burst modulation accuracy.

Parameters: <NR2> %

Example: READ:WIM:MACC:EVM:RMS?

READ:WIM:MEAS1:MACC:EVM:RMS?

READ:WIMax[:MEAS<i>]:MACCuracy:FNUMber?

Description: Starts a new measurement and retrieves the frame number of modulation accuracy.

Parameters: <NR1>

Example: READ:WIM:MACC:FNUM?

READ:WIM:MEAS1:MACC:FNUM?

READ:WIMAX[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Starts a new measurement and retrieves the IQ gain imbalance of modulation accuracy.

Parameters: <NR2> dB

Example: READ:WIM:MACC:IQER:GIMB?

READ:WIM:MEAS1:MACC:IQER:GIMB?

READ:WIMax[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Starts a new measurement and retrieves the IQ skew of modulation accuracy.

Parameters: <NR2> degree

Example: READ:WIM:MACC:IQER:SKEW?

READ:WIM:MEAS1:MACC:IQER:SKEW?

READ:WIMax[:MEAS<i>]:MACCuracy:SCERror?

Description: Starts a new measurement and retrieves the symbol clock error of modulation accuracy.

Parameters: <NR2> ppm

Example: READ:WIM:MACC:SCER?

READ:WIM:MEAS1:MACC:SCER?

READ:WIMax[:MEAS<i>]:SFLatness:ADJacent?

Description: Starts a new measurement and retrieves the adjacent spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: READ:WIM:SFL:ADJ?

READ:WIM:MEAS1:SFL:ADJ?

READ:WIMax[:MEAS<i>]:SFLatness:LOWer?

Description: Starts a new measurement and retrieves the lower spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: READ:WIM:SFL:LOW?

READ:WIM:MEAS1:SFL:LOW?

READ:WIMax[:MEAS<i>]:SFLatness:OVERall?

Description: Starts a new measurement and retrieves the overall spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: READ:WIM:SFL:OVER?

READ:WIM:MEAS1:SFL:OVER?

READ:WIMax[:MEAS<i>]:SFLatness:UPPer?

Description: Starts a new measurement and retrieves the upper spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: READ:WIM:SFL:UPP?

READ:WIM:MEAS1:SFL:UPP?

FETCh commands

```
FETCh
    :WIMax
        [:MEASurement<i>]
            :MACCuracy
                :RCE
                :FERRor?
            :OBW?
            :POWer
                :AVERage?
                :PEAK?
            :SMASk
                :STATus?
                :FREQuency?
                :LEVel?
```

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

```
            :MACCuracy
                :BURSt<i>
                    :EVM
                        :BID?
                        :CARRier
                            :DATA?
                            :PILot?
                            :UNModulated?
                        :ZID?
                    :RCE
                        :BID?
                        :CARRier
                            :DATA?
                            :PILot?
                            :UNModulated?
                        :RMS?
                        :ZID?
                :CLEak?
                :EVM
                    :RMS?
                :FNUMber?
                :IQERror
                    :GIMBalance?
                    :SKEW?
                :SCERror?
            :SFLatness
                :ADJacent?
                :LOWer?
                :OVERall?
                :UPPer?
```

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:BID?

Description: Queries the burst ID for burst modulation accuracy of the error vector modulation.

Parameters: <NR1>

Example: FETC:WIM:MACC:BURS:EVM:BID?

FETC:WIM:MEAS1:MACC:BURS:EVM:BID?

FETC:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:CARRier:DATA?

Description: Queries the error vector magnitude data carrier of the burst modulation accuracy.

Parameters: <NR2> %

Example: FETC:WIM:MACC:BURS:EVM:CARR:DATA?

FETC:WIM:MEAS1:MACC:BURS:EVM:CARR:DATA?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:CARRier:PILot?

Description: Queries the error vector magnitude pilot carrier of the burst modulation accuracy.

Parameters: <NR2> %

Example: FETC:WIM:MACC:BURS:EVM:CARR:PIL?

FETC:WIM:MEAS1:MACC:BURS:EVM:CARR:PIL?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:CARRier:UNModulated?

Description: Queries the error vector magnitude unmodulated carrier of the burst modulation accuracy.

Parameters: <NR2> %

Example: FETC:WIM:MACC:BURS:EVM:CARR:UNM?

FETC:WIM:MEAS1:MACC:BURS:EVM:CARR:UNM?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:EVM:ZID?

Description: Queries the zone ID for burst modulation accuracy of the error vector modulation.

Parameters: <NR1>

Example: FETC:WIM:MACC:BURS:EVM:ZID?

FETC:WIM:MEAS1:MACC:BURS:EVM:ZID?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:BID?

Description: Queries the burst ID for the burst modulation accuracy of RCE.

Parameters: <NR1>

Example: FETC:WIM:MACC:BURS:RCE:BID?

FETC:WIM:MEAS1:MACC:BURS:RCE:BID?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:CARRier:DATA?

Description: Queries the RCE data carrier of the burst modulation accuracy.

Parameters: <NR2> dB

Example: FETC:WIM:MACC:BURS:RCE:CARR:DATA?

FETC:WIM:MEAS1:MACC:BURS:RCE:CARR:DATA?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:CARRier:PILot?

Description: Queries the RCE pilot carrier of the burst modulation accuracy.

Parameters: <NR2> dB

Example: FETC:WIM:MACC:BURS:RCE:CARR:PIL?

FETC:WIM:MEAS1:MACC:BURS:RCE:CARR:PIL?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:CARRier:UNModulated?

Description: Queries the RCE unmodulated carrier of the burst modulation accuracy.

Parameters: <NR2> dB

Example: FETC:WIM:MACC:BURS:RCE:CARR:UNM?

FETC:WIM:MEAS1:MACC:BURS:RCE:CARR:UNM?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:RMS?

Description: Queries the RCE RMS of the burst modulation accuracy.

Parameters: <NR2> dB

Example: FETC:WIM:MACC:BURS:RCE:RMS?

FETC:WIM:MEAS1:MACC:BURS:RCE:RMS?

FETCh:WIMax[:MEAS<i>]:MACCuracy:BURSt:RCE:ZID?

Description: Queries the zone ID for the burst modulation accuracy of RCE.

Parameters: <NR1>

Example: FETC:WIM:MACC:BURS:RCE:ZID?

FETC:WIM:MEAS1:MACC:BURS:RCE:ZID?

FETCh:WIMax[:MEAS<i>]:MACCuracy:CLEak?

Description: Queries the carrier leak of the modulation accuracy.

Parameters: <NR2> dB

Example: FETC:WIM:MACC:CLE?

FETC:WIM:MEAS1:MACC:CLE?

FETCh:WIMax[:MEAS<i>]:MACCuracy:EVM:RMS?

Description: Queries the error vector modulation RMS of the burst modulation accuracy.

Parameters: <NR2> %

Example: FETC:WIM:MACC:EVM:RMS?

FETC:WIM:MEAS1:MACC:EVM:RMS?

FETCh:WIMax[:MEAS<i>]:MACCuracy:FNUMber?

Description: Queries the frame number of the modulation accuracy.

Parameters: <NR1>

Example: FETC:WIM:MACC:FNUM?

FETC:WIM:MEAS1:MACC:FNUM?

FETCh:WIMAX[:MEAS<i>]:MACCuracy:IQERror:GIMBalance?

Description: Queries the IQ gain imbalance of the modulation accuracy.

Parameters: <NR2> dB

Example: FETC:WIM:MACC:IQER:GIMB?

FETC:WIM:MEAS1:MACC:IQER:GIMB?

FETCh:WIMax[:MEAS<i>]:MACCuracy:IQERror:SKEW?

Description: Queries the IQ skew of the modulation accuracy.

Parameters: <NR2> degree

Example: FETC:WIM:MACC:IQER:SKEW?

FETC:WIM:MEAS1:MACC:IQER:SKEW?

FETCh:WIMax[:MEAS<i>]:MACCuracy:SCERror?

Description: Queries the symbol clock error of the modulation accuracy.

Parameters: <NR2> ppm

Example: FETC:WIM:MACC:SCER?

FETC:WIM:MEAS1:MACC:SCER?

FETCh:WIMax[:MEAS<i>]:SFLatness:ADJacent?

Description: Queries the adjacent spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: FETC:WIM:SFL:ADJ?

FETC:WIM:MEAS1:SFL:ADJ?

FETCh:WIMax[:MEAS<i>]:SFLatness:LOWer?

Description: Queries the lower spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: FETC:WIM:SFL:LOW?

FETC:WIM:MEAS1:SFL:LOW?

FETCh:WIMax[:MEAS<i>]:SFLatness:OVERall?

Description: Queries the overall spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: FETC:WIM:SFL:OVER?

FETC:WIM:MEAS1:SFL:OVER?

FETCh:WIMax[:MEAS<i>]:SFLatness:UPPer?

Description: Queries the upper spectral flatness.

Parameters: <CRD>

Valid values: PASS | FAIL

Example: FETC:WIM:SFL:UPP?

FETC:WIM:MEAS1:SFL:UPP?

CONFigure commands

CONFigure
:WIMax
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ANALysis
:CEQMode
:LENGth
:THReshold
:TRAcking
:AMPLitude
:PHASe
:TIME
:DOWNlink
:BURSt
:ADD
:BID
:REMove
:MODulation
:SUBChannel
[:COUNt]\?
:OFFSet\?
:SYMBol
[:COUNt]\?
:OFFSet\?
:ZONE
:ADD
:PBASe
:PRBSid
:REMove
:SCHannnel
:SYMBol
[:LENGth]\?
:OFFSet\?
:TYPE
:ZID

:SFLatness
:CSNap
:PSNap
:TYPE
:USER
:LIMit
:LOWer
:ADD
:CARRier
:INSert
:REMove
:UPPer
:ADD
:CARRier
:INSert
:REMove
:SMASk
:TYPE
:USER
:ADD
:FREQuency
:INSert
:LEVel
:REMove

```
:SYSTem
    :BWIDth
    :CELLid
    :DOWNlink
        :GROup<NUM, STAT>
        :PREamble
        :STATe
    :FFTSize
    :FLENgth
    :GPERiod
    :UPINK
        :FNUMber
            :AUTO
        :STATe
:UPLink
    :BURSt
        :ADD
        :BID
        :MODulation
        :REMove
        :SUBChannel
            :OFFSet\?
        :SYMBol
            [:COUNt]\?
            :OFFSet\?
    :ZONE
        :ADD
        :PBASe
        :REMove
        :SYMBol
            [:LENGth]\?
            :OFFSet\?
        :TYPE
        :ZID
```

CONFigure:WIMax:MEAS<i>:ANALysis:CEQMode

Description: Sets the channel equalization mode of the Wimax burst configuration.

Parameters: <CPD>

Valid values: NEQualization | PONLy

Example: CONF:WIM:MEAS1:ANAL:CEQM NEQ

CONFigure:WIMax:MEAS<i>:ANALysis:LENGth

Description: Sets the search length of the Wimax burst configuration.

Parameters: <NR2>

Valid units: ms | us | ns | s

Example: CONF:WIM:MEAS1:ANAL:LENG 2000.000 us

CONFigure:WIMax:MEAS<i>:ANALysis:TRAcking:AMPLitude

Description: Sets the pilot amplitude tracking of the Wimax burst configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WIM:MEAS1:ANAL:TRA:AMPL ON

CONFigure:WIMax:MEAS<i>:ANALysis:TRAcking:PHASe

Description: Sets the pilot phase tracking of the Wimax burst configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WIM:MEAS1:ANAL:TRA:PHAS OFF

CONFigure:WIMax:MEAS<i>:ANALysis:TRAcking:TIME

Description: Sets the pilot time tracking of the Wimax burst configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WIM:MEAS1:ANAL:TRA:TIME OFF

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:ADD

Description: Adds a burst for the downlink Wimax configuration.

Parameters: <BID, SOFFset, SCOFfset, NSYMbols, MTYPe>

Valid values: BID<NR1>

SOFF<NR1>

SCOF<NR1>

NSYM<NR1>

MTYP<QPSK | 16Qam | 64Qam>

Example: CONF:WIM:MEAS1:DOWN:BURS:ADD<0, 1, 0, 10, QPSK>

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:BID

Description: Sets the burst ID for the Wimax zone

Parameters: <NR1 >

Example: CONF:WIM:MEAS1:DOWN:BURS:BID<2>

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:REMove

Description: Removes an already added burst from the Wimax zone.

Parameters: <BID>

Valid values: <NR1>

Example: CONF:WIM:MEAS1:DOWN:BURS:REM<1>

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:MODulation

Description: Sets the modulation type for the burst of the Wimax zone.

Parameters: <CPD>

Valid values: <QPSK | 16QAM | 64QAM>

Example: CONF:WIM:MEAS1:DOWN:BURS:MOD QPSK

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:SUBChannel:COUNt

Description: Sets the number of the subchannel for the burst of the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:DOWN:BURS:SYMB:COUN 85

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:SUBChannel:OFFSet

Description: Sets the subchannel offset for the burst of the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:DOWN:BURS:SUBC:OFFS 3

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:SYMBol:COUNt

Description: Sets the number of the symbol for the burst of the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:DOWN:BURS:SYMB:COUN 85

CONFigure:WIMax:MEAS<i>:DOWNlink:BURSt:SYMBol:OFFSet

Description: Sets the symbol offset for the burst of the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:DOWN:BURS:SYMB:OFFS 3

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:ADD

Description: Adds the downlink zone for Wimax.

Parameters: <ZID, ZTYPe, SOFFset, NSYMbols, PBASe>

Valid values: ZID<0-2>

ZTYP<PUSC>

SOFF<0, 3, 6>

NSYM<NR1>

PBAS<0-69>

Example: CONF:WIM:MEAS1:DOWN:ZONE:ADD<0, PUSC, 0, 10, 23>

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:PBASe

Description: Sets the permutation base for the zone.

Parameters: <NR1>

Valid values: <0-69>

Example: CONF:WIM:MEAS1:DOWN:ZONE:PBAS 50

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:PRBSid

Description: Sets the PRBS ID for the zone.

Parameters: <NR1>

Valid values: <0-69>

Example: CONF:WIM:MEAS1:DOWN:ZONE:PRBS 5

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:REMove

Description: Removes the zone from Wimax.

Parameters: <ZID>

Valid values: <0-2>

Example: CONF:WIM:MEAS1:DOWN:ZONE:REM<2>

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:SCHannel

Description: Sets the status of the subchannel for the zone.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WIM:MEAS1:DOWN:ZONE:SCH ON

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:SYMBol:LENGth

Description: Sets the number of symbol for the zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:DOWN:ZONE:SYMB:LENG 512

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:SYMBol:OFFSet

Description: Sets the symbol offset for the zone.

Parameters: <NR1>

Valid values: <0 | 3 | 6>

Example: CONF:WIM:MEAS1:DOWN:ZONE:SYMB:OFFS 3

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:TYPE

Description: Sets the zone type for the zone.

Parameters: <CPD>

Valid values: <PUSC>

Example: CONF:WIM:MEAS1:DOWN:ZONE:TYPE PUSC

CONFigure:WIMax:MEAS<i>:DOWNlink:ZONE:ZID

Description: Sets the zone ID for the zone.

Parameters: <NR1>

Valid values: <0-2>

Example: CONF:WIM:MEAS1:DOWN:ZONE:ZID 2

CONFigure:WIMax:MEAS<i>:SFLatness:USER:CSNap

Description: Sets the power snap of the user mask.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:SFL:USER:CSN 2

CONFigure:WIMax:MEAS<i>:SFLatness:USER:PSNap

Description: Sets the power snap of the user mask.

Parameters: <NR2> dB

Example: CONF:WIM:MEAS1:SFL:USER:PSN 20.20 dB

CONFigure:WIMax:MEAS<i>:SFLatness:TYPE

Description: Sets the spectral mask type of the spectral flatness configuration.

Parameters: <CPD>

Valid values: IEEE | WFORum | USER

Example: CONF:WIM:MEAS1:SFL:TYPE USER

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:LOWer

Description: Sets the limit of the spectral flatness lower limits.

Parameters: <NR1> dB

Example: CONF:WIM:MEAS1:SFL:USER:LIM:LOW -15 dB

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:LOWer:ADD

Description: Adds one record for carrier and limit under the spectral flatness lower limits.

Parameters: <CARRier , LIMit> dB

Valid values: CARRier<NR1> LIMit<NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:LOW:ADD<1, -5>

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:LOWer:CARRier

Description: Sets the carrier of the spectral flatness lower limits.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:LOW:CARR 12

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:LOWer:INSert

Description: Inserts one record for carrier and limit under the spectral flatness lower limits.

Parameters: <CARRier , LIMit> dB

Valid values: CARRier<NR1> LIMit<NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:LOW:INS

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:LOWer:REMove

Description: Removes one record for carrier and limit from the spectral flatness upper limits.

Parameters: <CARRier , LIMit> dB

Valid values: CARRier<NR1> LIMit<NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:LOW:REM

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:UPPer

Description: Sets the limit of the spectral flatness upper limits.

Parameters: <NR1> dB

Example: CONF:WIM:MEAS1:SFL:USER:LIM:UPP -15 dB

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:UPPer:ADD

Description: Adds one record for carrier and limit under the spectral flatness upper limits.

Parameters: <CARRier,LIMit> dB

Valid values: Carrier<NR1>, LIMit<NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:UPP:ADD<5,10>

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:UPPer:CARRier

Description: Sets the carrier of the spectral flatness upper limits.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:UPP:CARR 10

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:UPPer:INSert

Description: Inserts one record for carrier and limit under spectral flatness upper limits.

Parameters: <CARRier,LIMit> dB

Valid values: Carrier<NR1>, LIMit<NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:UPP:INS<1, -20>

CONFigure:WIMax:MEAS<i>:SFLatness:USER:LIMit:UPPer:REMove

Description: Removes one record for carrier and limit from the spectral flatness upper limits.

Parameters: <CARRier,LIMit> dB

Valid values: Carrier<NR1>, LIMit<NR1>

Example: CONF:WIM:MEAS1:SFL:USER:LIM:UPP:REM

CONFigure:WIMax:MEAS<i>:SMASk:TYPE

Description: Sets the spectral mask type of the spectral mask configuration.

Parameters: <CPD>

Valid values: 8A | 8B | 8N | UDEFined

Example: CONF:WIM:MEAS1:SMAS:TYPE 8A

CONFigure:WIMax:MEAS<i>:SMASk:USER:FRequency

Description: Sets the spectral mask frequency of the spectral mask configuration.

Parameters: <NR1>Hz

Example: CONF:WIM:MEAS1:SMAS:USER:FREQ 24 Hz

CONFigure:WIMax:MEAS<i>:SMASk:USER:LEVel

Description: Sets the spectral mask level of the spectral mask configuration.

Parameters: <NR1>Hz

Example: CONF:WIM:MEAS1:SMAS:USER:LEV 100dBr

CONFigure:WIMax:MEAS<i>:SYSTem:BWIDth

Description: Sets the bandwidth of the Wimax system configuration.

Parameters: <NR2>MHz

Valid values: 1.25 | 3.5 | 4.375 | 5.0 | 7.0 | 8.75 | 10.0 | 14.0 | 15.0 | 17.5 | 20.0

Example: CONF:WIM:MEAS1:SYST:BWID 3.5 MHz

CONFigure:WIMax:MEAS<i>:SYSTem:CELLid

Description: Sets the cell ID of the Wimax system configuration.

Parameters: <NR1>

Valid values: 0 to 31

Example: CONF:WIM:MEAS1:SYST:CELL 16

CONFigure:WIMax:MEAS<i>:SYSTem:DOWNlink:GROup<NUM,STAT>

Description: Sets the group selection in downlink direction of the Wimax system configuration for a given group and state.

Parameters: <cpd>

Valid values: 0-5, ON | OFF

Example: CONF:WIM:MEAS1:SYST:DOWN:GRO<1,ON>

CONFigure:WIMax:MEAS<i>:SYSTem:DOWNlink:PREamble

Description: Sets the preamble index in downlink direction of the Wimax system configuration.

Parameters: <NR1>

Valid values: 0 to 113

Example: CONF:WIM:MEAS1:SYST:DOWN:PRE 20

CONFigure:WIMax:MEAS<i>:SYSTem:DOWNlink:STATe

Description: Sets the downlink direction of the Wimax system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WIM:MEAS1:SYST:DOWN:STAT ON

CONFigure:WIMax:MEAS<i>:SYSTem:FFTSize

Description: Sets the FFT size of the Wimax system configuration.

Parameters: <NR1>

Valid values: 128 | 512 | 1024 | 2048

Example: CONF:WIM:MEAS1:SYST:FFTS 1024

CONFigure:WIMax:MEAS<i>:SYSTem:FLENgth

Description: Sets the frame length of the Wimax system configuration.

Parameters: <NR2>ms

Valid values: 2.5 | 4.0 | 5.0 | 8.0 | 10.0 | 12.5 | 20.0

Example: CONF:WIM:MEAS1:SYST:FLEN 2.5 ms

CONFigure:WIMax:MEAS<i>:SYSTem:GPERiod

Description: Sets the guard period of the Wimax system configuration.

Parameters: <NR2>

Valid values: 1/32 | 1/16 | 1/8 | 1/4

Example: CONF:WIM:MEAS1:SYST:GPER 1/8

CONFigure:WIMax:MEAS<i>:SYSTem:UPLink:FNUMber

Description: Sets the frame number of the Wimax system configuration.

Parameters: <NR1>

Valid values: 0 to 15

Example: CONF:WIM:MEAS1:SYST:UPL:FNUM 12

CONFigure:WIMax:MEAS<i>:SYSTem:UPLink:FNUMber:AUTO

Description: Sets the frame number auto detection of the Wimax system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WIM:MEAS1:SYST:UPL:FNUM:AUTO ON

CONFigure:WIMax:MEAS<i>:SYSTem:UPLink:STATe

Description: Sets the uplink direction of the Wimax system configuration.

Parameters: <Boolean>

Valid values: ON | OFF

Example: CONF:WIM:MEAS1:SYST:UPL:STAT ON

CONFigure:WIMax:MEAS<i>:UPLink:BURSt:ADD

Description: Adds a burst for the uplink Wimax configuration.

Parameters: <BID, SOFFset, SCOFfset, NSYMbols, MTYPe>

Valid values: BID<NR1>

SOFF<NR1>

SCOF<NR1>

NSYM<NR1>

MTYP<QPSK | 16Qam | 64Qam>

Example: CONF:WIM:MEAS1:UPL:BURS:ADD<0, 1, 0, 10, QPSK>

CONFigure:WIMax:MEAS<i>:UPLink:BURSt:BID

Description: Sets the burst ID for the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:UPL:BURS:BID<2>

CONFigure:WIMax:MEAS<i>:UPLink:BURSt:MODulation

Description: Sets the modulation type for the burst of the Wimax zone.

Parameters: <CPD>

Valid values: <QPSK | 16QAM | 64QAM>

Example: CONF:WIM:MEAS1:UPL:BURS:MOD QPSK

CONFigure:WIMax:MEAS<i>:UPLink:BURSt:REMove

Description: Removes an already added burst from the Wimax zone.

Parameters: <BID>

Valid values: <NR1>

Example: CONF:WIM:MEAS1:UPL:BURS:REM<1>

CONFigure:WIMax:MEAS<i>:UPLink:BURSt:SUBChannel:OFFSet

Description: Sets the subchannel offset for the burst of the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:UPL:BURS:SUBC:OFFS 3

CONFigure:WIMax:MEAS<i>:UPLink:BURSt:SYMBol:COUNt

Description: Sets the number of symbol for the burst of the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:UPL:BURS:SYMB:COUN 85

CONFigure:WIMax:MEAS<i>:UPLink:BURSt:SYMBol:OFFSet

Description: Sets the symbol offset for the burst of the Wimax zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:UPL:BURS:SYMB:OFFS 3

CONFigure:WIMax:MEAS<i>:UPLink:ZONE:ADD

Description: Adds the zone for Wimax.

Parameters: <ZID, ZTYPe, SOFFset, NSYMbols, PBASe>

Valid values: ZID<0-2>

ZTYP<PUSC>

SOFF<0, 3, 6>

NSYM<NR1>

PBAS<0-69>

Example: CONF:WIM:MEAS1:UPL:ZONE:ADD<0, PUSC, 0, 10, 23>

CONFigure:WIMax:MEAS<i>:UPLink:ZONE:PBASe

Description: Sets the permutation base for the zone.

Parameters: <NR1>

Valid values: <0-69>

Example: CONF:WIM:MEAS1:UPL:ZONE:PBAS 50

CONFigure:WIMax:MEAS<i>:UPLink:ZONE:REMove

Description: Removes the zone for Wimax.

Parameters: <ZID>

Valid values: <0-2>

Example: CONF:WIM:MEAS1:UPL:ZONE:REM<2>

CONFigure:WIMax:MEAS<i>:UPLink:ZONE:SYMBol:LENGth

Description: Sets the number of symbol for the zone.

Parameters: <NR1>

Example: CONF:WIM:MEAS1:UPL:ZONE:SYMB:LENG 512

CONFigure:WIMax:MEAS<i>:UPLink:ZONE:SYMBol:OFFSet

Description: Sets the symbol offset for the zone.

Parameters: <NR1>

Valid values: <0 | 3 | 6>

Example: CONF:WIM:MEAS1:UPL:ZONE:SYMB:OFFS 3

CONFigure:WIMax:MEAS<i>:UPLink:ZONE:TYPE

Description: Sets the zone type for the zone.

Parameters: <CPD>

Valid values: <PUSC>

Example: CONF:WIM:MEAS1:UPL:ZONE:TYPE PUSC

CONFigure:WIMax:MEAS<i>:UPLink:ZONE:ZID

Description: Sets the zone ID for the zone.

Parameters: <NR1>

Valid values: <0-2>

Example: CONF:WIM:MEAS1:UPL:ZONE:ZID 2

TRACe commands

```
READ
    :WIMAX
        [:MEASurement<i>]
            :TRACe
                :CCDF
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                    :MINimum?
                :CONStellation
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                    :MINimum?
                :CPVTime
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                    :MINimum?
                :EVSYmbol
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                    :MINimum?
                :PVTime
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                :SFLatness
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                    :MINimum?
                :SMASk
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                    :MINimum?
                :SPECtrum
                    :AVERage?
                    [:CURRent]?
                    :MAXimum?
                    :MINimum?
```

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:CEVSymbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CXUCarrier
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:EVSubcarrier
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

Clock error vs. symbol results (trace)

The following commands return the clock error vs. symbol trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:WIMax[:MEAS<i>]:TRACe:CEVSymbol:AVERage?

READ:WIMax[:MEAS<i>]:TRACe:CEVSymbol[:CURRent]?

READ:WIMax[:MEAS<i>]:TRACe:CEVSymbol:MAXimum?

READ:WIMax[:MEAS<i>]:TRACe:CEVSymbol:MINimum?

FETCh:WIMax[:MEAS<i>]:TRACe:CEVSymbol:AVERage?

FETCh:WIMax[:MEAS<i>]:TRACe:CEVSymbol [:CURRent]?

FETCh:WIMax[:MEAS<i>]:TRACe:CEVSymbol:MAXimum?

FETCh:WIMax[:MEAS<i>]:TRACe:CEVSymbol:MINimum?

The clock error vs. symbol trace contains symbol in the x axis and clock error (ppm) in the y axis.

Returned values: < symbol1, evm1>... < symbol n, evm n>

Symbol range: -1000 to 1000

EVM range: -25 ppm to 25 ppm

Example: READ:WIM:MEAS1:TRAC:CEVS?

Constellation (excluding unmodulated carrier) (trace)

The following commands return the constellation (excluding unmodulated carrier) trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:WIMax[:MEAS<i>]:TRACe:CXUCarrier:AVERage?

READ:WIMax[:MEAS<i>]:TRACe:CXUCarrier[:CURRent]?

READ:WIMax[:MEAS<i>]:TRACe:CXUCarrier:MAXimum?

READ:WIMax[:MEAS<i>]:TRACe:CXUCarrier:MINimum?

FETCh:WIMax[:MEAS<i>]:TRACe:CXUCarrier:AVERage?

FETCh:WIMax[:MEAS<i>]:TRACe:CXUCarrier[:CURRent]?

FETCh:WIMax[:MEAS<i>]:TRACe:CXUCarrier:MAXimum?

FETCh:WIMax[:MEAS<i>]:TRACe:CXUCarrier:MINimum?

The constellation (excluding unmodulated carrier) trace contains I in the x axis and q in the y axis.

Returned values: < I1, Q1>... < l n, Q n>

I range: -3 to 3

Q range: -3 to 3

Example: READ:WIM:MEAS1:TRAC:CXUC?

EVM vs. subcarrier results (trace)

The following commands return the EVM vs. subcarrier trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ:WIMax[:MEAS<i>]:TRACe:EVSarrier:AVERage?

READ:WIMax[:MEAS<i>]:TRACe:EVSarrier[:CURRent]?

READ:WIMax[:MEAS<i>]:TRACe:EVSarrier:MAXimum?

READ:WIMax[:MEAS<i>]:TRACe:EVSarrier:MINimum?

FETCh:WIMax[:MEAS<i>]:TRACe:EVSarrier:AVERage?

FETCh:WIMax[:MEAS<i>]:TRACe:EVSarrier [:CURRent]?

FETCh:WIMax[:MEAS<i>]:TRACe:EVSarrier:MAXimum?

FETCh:WIMax[:MEAS<i>]:TRACe:EVSarrier:MINimum?

The EVM vs. subcarrier trace contains subcarrier in the x axis and EVM(%) in the y axis.

Returned values: < subcarrier1, evm1>... < subcarrier n, evm n>

Symbol range: -1000 to 1000

EVM range: 0 % to 10 %

Example: READ:WIM:MEAS1:TRAC:EVS?

BLUETOOTH COMMANDS

READ commands

READ
:BLUetooth
[:MEASurement<i>]
:ACP
:CHANnel?

For the definition/behavior of the above commands, refer to the generic section READ commands.

:LEVel?
:BANalysis
:BURSt
:LENGth?
:POSition?
:FEDGe
:TIMe?
:GFSK
:BURSt
:LENGth
:POSition
:PSK
:BURSt
:LENGth
:POSition
:REDGe
:TIMe?
:CFMeasurements
:ICFTol?
:MCARrier
:DRIFt?
:RATe?
:FREQ?
:EDRSemissions
:CHANnel?
:LEVel?

```
:EModulation
    :AEBCount
        :CUMulative?
    :DEVM
        :MAX
            :RMS
                :BURSt?
                :CUMulative?
        :PEAK
            :BURSt?
            :CUMulative?
        :99%
            :BURSt?
            :CUMulative?
    :MAX
        :BLOCk
            :FERRor
                :BURSt?
                :CUMulative?
        :INITial
            :FERRor?
                :BURSt?
                :CUMulative?
        :TOTal
            :FERRor
                :BURSt?
                :CUMulative?
    :ORIGin
        :OFFSet
            :AVERage
                :DB?
                    :BURSt?
:PERCentage?
                    :BURSt?
            :MAX
                :DB
                    :BURSt?
                :PERCentage?
            :MIN
                :DB
                    :BURSt?
                :PERCentage?
                    :BURSt?
```

```
:MODCharacteristics
    :F1
        :AVG?
        :PCOunt?
    :F2
        :AVG?
        :MPRate?
        :PCOunt?
    :AVG
        :F2
            :F1
                :RATio?
:POWer
    :AVERage?
    :BANDwidth?
    :DENSity?
    :EDR
        :TPOWer?
    :GFSK
        :AVERage
    :OBW?
    :PEAK?
    :PSK
        :AVERage?
```

READ:BLUetooth[:MEAS<i>]:ACP:LEVel?

Description: Starts a new measurement and retrieves the adjacent channel level.

Response: <NR2>+-double

Returned values: <Level>

Example: READ:BLUe:ACP:LEV?

READ:BLUe:MEAS1:ACP:LEV?

READ:BLUetooth[:MEAS<i>]:BANalysis:BURSt:LENGth?

Description: Starts a new measurement and retrieves the burst length of the burst analysis.

Response: <NR2> us

Example: READ:BLUe:BAN:BURS:LENG?

READ:BLUe:MEAS1:BAN:BURS:LENG?

READ:BLUetooth[:MEAS<i>]:BANalysis:BURSt:POSition?

Description: Starts a new measurement and retrieves the burst position of the burst analysis.

Response: <NR2> us

Example: READ:BLUe:BAN:BURS:POS?

READ:BLUe:MEAS1:BAN:BURS:POS?

READ:BLUetooth[:MEAS<i>]:BANalysis:FEDGe:TIMe?

Description: Starts a new measurement and retrieves the falling edge time of the burst analysis.

Response: <NR2> us

Example: READ:BLUe:BAN:FEDG:TIM?

READ:BLUe:MEAS1:BAN:FEDG:TIM?

READ:BLUetooth[:MEAS<i>]:BANalysis:GFSK:BURSt:LENGth?

Description: Starts a new measurement and retrieves the GFSK burst length of the burst analysis.

Response: <NR2>

Example: READ:BLUe:BAN:GFSK:BURSt:LENG?

READ:BLUe:MEAS1:BAN:GFSK:BURSt:LENG?

READ:BLUetooth[:MEAS<i>]:BANalysis:GFSK:BURSt:POSition?

Description: Starts a new measurement and retrieves the GFSK burst position of the burst analysis.

Response: <NR2>

Example: READ:BLUe:BAN:GFSK:BURSt:POS?

READ:BLUe:MEAS1:BAN:GFSK:BURSt:POS?

READ:BLUetooth[:MEAS<i>]:BANalysis:PSK:BURSt:LENGth?

Description: Starts a new measurement and retrieves the PSK burst length of the burst analysis.

Response: <NR2> us

Example: READ:BLUe:BAN:PSK:BURSt:LENG?

READ:BLUe:MEAS1:BAN:PSK:BURSt:LENG?

READ:BLUetooth[:MEAS<i>]:BANalysis:PSK:BURSt:POSition?

Description: Starts a new measurement and retrieves the PSK burst position of the burst analysis.

Response: <NR2> us

Example: READ:BLUe:BAN:PSK:BURSt:POS?

READ:BLUe:MEAS1:BAN:PSK:BURSt:POS?

READ:BLUetooth[:MEAS<i>]:BANalysis:REDGe:TIMe?

Description: Starts a new measurement and retrieves the rising edge time of the burst analysis.

Response: <NR2> us

Example: READ:BLUe:BAN:REDG:TIM?

READ:BLUe:MEAS1:BAN:REDG:TIM?

READ:BLUetooth[:MEAS<i>]:CFMeasurements:ICFTol?

Description: Starts a new measurement and retrieves the initial carrier frequency tolerance of the carrier frequency measurements.

Response: <NR2> us

Example: READ:BLUe:CFM:ICFT:?

READ:BLUe:MEAS1:CFM:ICFT?

READ:BLUetooth[:MEAS<i>]:CFMeasurements:MCARrier:DRIFt:RATe?

Description: Starts a new measurement and retrieves the maximum carrier frequency drift rate of the carrier frequency measurements.

Response: <NR2> us

Example: READ:BLUe:CFM:MCAR:DRIFt:RAT?

READ:BLUe:MEAS1:CFM:MCAR:DRIFt:RATe?

READ:BLUetooth[:MEAS<i>]:CFMeasurements:MCARrier:FREQ?

Description: Starts a new measurement and retrieves the maximum carrier frequency drift of the carrier frequency measurements.

Response: <NR2> us

Example: READ:BLUe:CFM:MCAR:FREQ?

READ:BLUe:MEAS1:CFM:MCAR:FREQ?

READ:BLUetooth[:MEAS<i>]:EDRSemissions:CHANnel?

Description: Starts a new measurement and retrieves the channel of the EDR spurious emissions.

Response: <NR2> us

Example: READ:BLUe:EDRS:CHANnel?

READ:BLUe:MEAS1:EDRS:CHANnel?

READ:BLUetooth[:MEAS<i>]:EDRSemissions:LEVel?

Description: Starts a new measurement and retrieves the level of the EDR spurious emissions.

Response: <NR2> us

Example: READ:BLUe:EDRS:LEVel?

READ:BLUe:MEAS1:EDRS:LEVel?

READ:BLUetooth[:MEAS<i>]:EModulation:AEBCount:CUMulative?

Description: Starts a new measurement and retrieves the accumulated EDR block count of the EDR modulation (cumulative).

Response: <NR2> us

Example: READ:BLUe:EMOD:AEBC:CUMu?

READ:BLUe:MEAS1:EMOD:AEBC:CUMu?

READ:BLUetooth[:MEAS<i>]:EModulation:DEVM:MAX:RMS:BURSt?

Description: Starts a new measurement and retrieves the maximum RMS of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:DEVM:MAX:RMS:BURSt?

READ:BLUe:MEAS1:EMOD:DEVM:MAX:RMS:BURSt?

READ:BLUetooth[:MEAS<i>]:EModulation:DEVM:MAX:RMS:CUMulative?

Description: Starts a new measurement and retrieves the maximum RMS of the EDR modulation (cumulative).

Response: <NR2> us

Example: READ:BLUe:EMOD:DEVM:MAX:RMS:CUMu?

READ:BLUe:MEAS1:EMOD:DEVM:MAX:RMS:CUMu?

READ:BLUetooth[:MEAS<i>]:EModulation:DEVM:PEAK:BURSt?

Description: Starts a new measurement and retrieves the DEVM peak of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:DEVM:PEAK:BURSt?

READ:BLUe:MEAS1:EMOD:DEVM:PEAK:BURSt?

READ:BLUetooth[:MEAS<i>]:EModulation:DEVM:PEAK:CUMulative?

Description: Starts a new measurement and retrieves the DEVM peak of the EDR modulation (cumulative).

Response: <NR2> us

Example: READ:BLUe:EMOD:DEVM:PEAK:CUMulative?

READ:BLUe:MEAS1:EMOD:DEVM:PEAK:CUMulative?

READ:BLUetooth[:MEAS<i>]:EModulation:DEVM:99%?

Description: Starts a new measurement and retrieves the DEVM 99% of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:DEVM:99%?

READ:BLUe:MEAS1:EMOD:DEVM:99%?

READ:BLUetooth[:MEAS<i>]:EModulation:MAX:BLOCk:FERRor:BURSt?

Description: Starts a new measurement and retrieves the maximum block frequency error of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:MAX:BLOC:FERR:BURSt?

READ:BLUe:MEAS1:EMOD:MAX:BLOC:FERR:BURSt?

READ:BLUetooth[:MEAS<i>]:EModulation:MAX:BLOCk:FERRor :CUMulative?

Description: Starts a new measurement and retrieves the maximum block frequency error of the EDR modulation (cumulative).

Response: <NR2> us

Example: READ:BLUe:EMOD:MAX:BLOC:FERR:CUMu?

READ:BLUe:MEAS1:EMOD:MAX:BLOC:FERR:CUMu?

READ:BLUetooth[:MEAS<i>]:EModulation:MAX:INITial:FERRor:BURSt?

Description: Starts a new measurement and retrieves the initial frequency error of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:MAX:INIT:FERR:BURSt?

READ:BLUe:MEAS1:EMOD:MAX:INIT:FERR:BURSt?

READ:BLUetooth[:MEAS<i>]:EModulation:MAX:INITial:FERRor :CUMulative?

Description: Starts a new measurement and retrieves the initial frequency error of the EDR modulation (cumulative).

Response: <NR2> us

Example: READ:BLUe:EMOD:MAX:INIT:FERR:CUMu?

READ:BLUe:MEAS1:EMOD:MAX:INIT:FERR:CUMu?

READ:BLUetooth[:MEAS<i>]:EModulation:MAX:TOTal:FERRor:BURSt?

Description: Starts a new measurement and retrieves the maximum total frequency error of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:MAX:TOTal:FERR:BURSt?

READ:BLUe:MEAS1:EMOD:MAX:TOTal:FERR:BURSt?

READ:BLUetooth[:MEAS<i>]:EModulation:MAX:TOTal:FERRor :CUMulative?

Description: Starts a new measurement and retrieves the maximum total frequency error of the EDR modulation (cumulative).

Response: <NR2> us

Example: READ:BLUe:EMOD:MAX:TOT:FERR:CUMu?

READ:BLUe:MEAS1:EMOD:MAX:TOTal:FERR:CUMu?

READ:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:AVERage:DB?

Description: Starts a new measurement and retrieves the origin offset average (dB) of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:ORIGin:OFFS:AVER:db?

READ:BLUe:MEAS1:EMOD:ORIGin:OFFS:AVER:db?

READ:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MAX:DB?

Description: Starts a new measurement and retrieves the origin offset maximum (dB) of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:ORIGin:OFFS:MAX:db?

READ:BLUe:MEAS1:EMOD:ORIGin:OFFS:MAX:db?

READ:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MAX :Percentage?

Description: Starts a new measurement and retrieves the origin offset maximum (%) of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:ORIGin:OFFS:MAX:PERC?

READ:BLUe:MEAS1:EMOD:ORIGin:OFFS:MAX:PERC?

READ:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MIN:DB?

Description: Starts a new measurement and retrieves the origin offset minimum (dB) of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:ORIGin:OFFS:MIN:db?

READ:BLUe:MEAS1:EMOD:ORIGin:OFFS:MIN:db?

READ:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MIN :PERCentage?

Description: Starts a new measurement and retrieves the origin offset minimum (%) of the EDR modulation (burst).

Response: <NR2> us

Example: READ:BLUe:EMOD:ORIGin:OFFS:MIN:PERC?

READ:BLUe:MEAS1:EMOD:ORIGin:OFFS:MIN:PERC

READ:BLUetooth[:MEAS<i>]:MODCharacteristics:F1:AVG?

Description: Starts a new measurement and retrieves the F1 average of the modulation characteristics.

Response: <NR2> us

Example: READ:BLUe:MODC:F1:AVG?

READ:BLUe:MEAS1:MODC:F1:AVG?

READ:BLUetooth[:MEAS<i>]:MODCharacteristics:F1:PCOunt?

Description: Starts a new measurement and retrieves the F1 packet count of the modulation characteristics.

Response: <NR2> us

Example: READ:BLUe:MODC:F1:PCO?

READ:BLUe:MEAS1:MODC:F1:PCO?

READ:BLUetooth[:MEAS<i>]:MODCharacteristics:F2:AVG?

Description: Starts a new measurement and retrieves the F2 average of the modulation characteristics.

Response: <NR2> us

Example: READ:BLUe:MODC:F2:AVG?

READ:BLUe:MEAS1:MODC:F2:AVG?

READ:BLUetooth[:MEAS<i>]:MODCharacteristics:F2:MPRate?

Description: Starts a new measurement and retrieves the F2 maximum pass rate of the modulation characteristics.

Response: <NR2> us

Example: READ:BLUe:MODC:F2:MPRate?

READ:BLUe:MEAS1:MODC:F2:MPR?

READ:BLUetooth[:MEAS<i>]:MODCharacteristics:F2:PCOunt?

Description: Starts a new measurement and retrieves the F2 packet count of the modulation characteristics.

Response: <NR2> us

Example: READ:BLUe:MODC:F2:PCO?

READ:BLUe:MEAS1:MODC:F2:PCO?

READ:BLUetooth[:MEAS<i>]:MODCharacteristics:AVG:F2:F1:RATio?

Description: Starts a new measurement and retrieves the average F2 vs. F1 ratio of the modulation characteristics.

Response: <NR2> us

Example: READ:BLUe:MODC:AVG:F2:F1:RATio?

READ:BLUe:MEAS1:MODC:AVG:F2:F1:RAT?

READ:BLUetooth[:MEAS<i>]:POWer:AVERage?

Description: Starts a new measurement and retrieves the average power of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:AVERage?

READ:BLUe:MEAS1:POW:AVER?

READ:BLUetooth[:MEAS<i>]:POWer:BANDwidth?

Description: Starts a new measurement and retrieves the -20 dB bandwidth of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:BANDwidth?

READ:BLUe:MEAS1:POW:BAND?

READ:BLUetooth[:MEAS<i>]:POWer:DENSity?

Description: Starts a new measurement and retrieves the density of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:DENSity?

READ:BLUe:MEAS1:POW:DENS?

READ:BLUetooth[:MEAS<i>]:POWer:EDR:TPOWer??

Description: Starts a new measurement and retrieves the EDR relative Tx power of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:EDR:TPOWer?

READ:BLUe:MEAS1:POW:EDR:TPOW?

READ:BLUetooth[:MEAS<i>]:POWer:GFSK:AVERage?

Description: Starts a new measurement and retrieves the GFSK average power of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:GFSK:AVER?

READ:BLUe:MEAS1:POW:GFSK:AVER?

READ:BLUetooth[:MEAS<i>]:POWer:OBW?

Description: Starts a new measurement and retrieves the occupied bandwidth of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:OBW?

READ:BLUe:MEAS1:POW:OBW?

READ:BLUetooth[:MEAS<i>]:POWer:PEAK?

Description: Starts a new measurement and retrieves the peak power of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:PEAK?

READ:BLUe:MEAS1:POW:PEAK?

READ:BLUetooth[:MEAS<i>]:POWer:PSK:AVERage?

Description: Starts a new measurement and retrieves the PSK average power of the power/spectrum measurement.

Response: <NR2> us

Example: READ:BLUe:POWer:PSK:AVERage?

READ:BLUe:MEAS1:POW:PSK:AVER?

FETCh commands

FETC
:BLUetooth
[:MEASurement<i>]
:ACP
:CHANnel?

For the definition/behavior of the above commands, refer to the generic section FETCH commands.

:LEVel?
:BANalysis
:BURSt
:LENGth?
:POSition?
:FEDGe
:TIMe?
:GFSK
:BURSt
:LENGth?
:POSition?
:PSK
:BURSt
:LENGth?
:POSition?
:REDGe
:TIMe?
:CFMeasurements
:ICFTol?
:MCARrier
:DRIFt
:RATe?
:FREQ?
:EDRSemissions
:CHANnel?
: LEVel?
:EModulation
:AEBCount
:CUMulative?

```
:MAX
    :BLOCk
        :FERRor
            :BURSt?
            :CUMulative?
    :INITial
        :FERRor?
            :BURSt?
            :CUMulative?
    :TOTal
        :FERRor
            :BURSt?
            :CUMulative?
:DEVM
    :MAX
        :RMS
            :BURSt?
            :CUMulative?
    :PEAK
        :BURSt?
        :CUMulative?
    :99%
        :BURSt?
        :CUMulative
:ORIGin
    :OFFSet
        :AVERage
            :DB?
                :BURSt?
            :Percentage?
                :BURSt?
        :MAX
            :DB?
                :BURSt?
            :PERCentage?
        :MIN
            :DB?
                :BURSt?
            :PERCentage?
                :BURSt?
```

```
:MODCharacteristics
    :AVG
        :F2
            :F1
                RATio?
    :F1
        :AVG?
        :PCOunt?
    :F2
        :AVG?
        :MPRate?
        :PCOunt?
                :RATio?
:POWer
    :AVERage?
    :BANDwidth?
    :DENSity?
    :EDR
        :TPOWer?
    :GFSK
        :AVERage?
    :OBW?
    :PEAK?
    :PSK
        :AVERage?
```

FETC:BLUetooth[:MEAS<i>]:ACP:LEVel?

Description: Queries the adjacent channel level.

Response: <NR2>+-double

Returned values: <Level>

Example: FETC:BLUe:ACP:LEV?

FETC:BLUe:MEAS1:ACP:LEV?

FETC:BLUetooth[:MEAS<i>]:BANalysis:BURSt:LENGth?

Description: Queries the burst length of the burst analysis.

Response: <NR2> us

Example: FETC:BLUe:BAN:BURS:LENG?

FETC:BLUe:MEAS1:BAN:BURS:LENG?

FETC:BLUetooth[:MEAS<i>]:BANalysis:BURSt:POSition?

Description: Queries the burst position of the burst analysis.

Response: <NR2> us

Example: FETC:BLUe:BAN:BURS:POS?

FETC:BLUe:MEAS1:BAN:BURS:POS?

FETC:BLUetooth[:MEAS<i>]:BANalysis:FEDGe:TIMe?

Description: Queries the falling edge time of the burst analysis.

Response: <NR2> us

Example: FETC:BLUe:BAN:FEDG:TIM?

FETC:BLUe:MEAS1:BAN:FEDG:TIM?

FETC:BLUetooth[:MEAS<i>]:BANalysis:GFSK:BURSt:LENGth?

Description: Queries the GFSK burst length of the burst analysis.

Response: <NR2>

Example: FETC:BLUe:BAN:GFSK:BURSt:LENG?

FETC:BLUe:MEAS1:BAN:GFSK:BURSt:LENG?

FETC:BLUetooth[:MEAS<i>]:BANalysis:GFSK:BURSt:POSition?

Description: Queries the GFSK burst position of the burst analysis.

Response: <NR2>

Example: FETC:BLUe:BAN:GFSK:BURSt:POS?

FETC:BLUe:MEAS1:BAN:GFSK:BURSt:POS?

FETC:BLUetooth[:MEAS<i>]:BANalysis:PSK:BURSt:LENGth?

Description: Queries the PSK burst length of the burst analysis.

Response: <NR2> us

Example: FETC:BLUe:BAN:PSK:BURSt:LENG?

FETC:BLUe:MEAS1:BAN:PSK:BURSt:LENG?

FETC:BLUetooth[:MEAS<i>]:BANalysis:PSK:BURSt:POSition?

Description: Queries the PSK burst position of the burst analysis.

Response: <NR2> us

Example: FETC:BLUe:BAN:PSK:BURSt:POS?

FETC:BLUe:MEAS1:BAN:PSK:BURSt:POS?

FETC:BLUetooth[:MEAS<i>]:BANalysis:REDGe:TIMe?

Description: Queries the rising edge time of the burst analysis.

Response: <NR2> us

Example: FETC:BLUe:BAN:REDG:TIM?

FETC:BLUe:MEAS1:BAN:REDG:TIM?

FETC:BLUetooth[:MEAS<i>]:CFMeasurements:ICFTol?

Description: Queries the initial carrier frequency tolerance of the carrier frequency measurements.

Response: <NR2> us

Example: FETC:BLUe:CFM:ICFT?

FETC:BLUe:MEAS1:CFMeasurements:ICFTol?

FETC:BLUetooth[:MEAS<i>]:CFMeasurements:MCARrier:DRIFt:RATe?

Description: Queries the maximum carrier frequency drift rate of the carrier frequency measurements.

Response: <NR2> us

Example: FETC:BLUe:CFM:MCAR:DRIFt:RAT?

FETC:BLUe:MEAS1:CFM:MCAR:DRIFt:RATe?

FETC:BLUetooth[:MEAS<i>]:CFMeasurements:MCARrier:FREQ?

Description: Queries the maximum carrier frequency drift of the carrier frequency measurements.

Response: <NR2> us

Example: FETC:BLUe:CFM:MCAR:FREQ?

FETC:BLUe:MEAS1:CFM:MCAR:FREQ?

FETC:BLUetooth[:MEAS<i>]:EDRSemissions:CHANnel?

Description: Queries the channel of the EDR spurious emissions.

Response: <NR2> us

Example: FETC:BLUe:EDRS:CHANnel?

FETC:BLUe:MEAS1:EDRS:CHANnel?

FETC:BLUetooth[:MEAS<i>]EDRSemissions:LEVel?

Description: Queries the level of the EDR spurious emissions.

Response: <NR2> us

Example: FETC:BLUe:EDRS:LEVel?

FETC:BLUe:MEAS1:EDRS:LEVel?

FETC:BLUetooth[:MEAS<i>]:EModulation:AEBCount:CUMulative?

Description: Queries the accumulated EDR block count of the EDR modulation (cumulative).

Response: <NR2> us

Example: FETC:BLUe:EMOD:AEBC:CUMu?

FETC:BLUe:MEAS1:EMOD:AEBC:CUMu?

FETC:BLUetooth[:MEAS<i>]:EModulation:MAX:BLOCk:FERRor:BURSt?

Description: Queries the maximum block frequency error of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:MAX:BLOC:FERR:BURSt?

FETC:BLUe:MEAS1:EMOD:MAX:BLOC:FERR:BURSt?

FETC:BLUetooth[:MEAS<i>]:EModulation:MAX:BLOCk:FERRor :CUMulative?

Description: Queries the maximum block frequency error of the EDR modulation (cumulative).

Response: <NR2> us

Example: FETC:BLUe:EMOD:MAX:BLOC:FERR:CUMu?

FETC:BLUe:MEAS1:EMOD:MAX:BLOC:FERR:CUMu?

FETC:BLUetooth[:MEAS<i>]:EModulation:MAX:INITial:FERRor:BURSt?

Description: Queries the initial frequency error of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:MAX:INIT:FERR:BURSt?

FETC:BLUe:MEAS1:EMOD:MAX:INIT:FERR:BURSt?

FETC:BLUetooth[:MEAS<i>]:EModulation:MAX:INITial:FERRor :CUMulative?

Description: Queries the initial frequency error of the EDR modulation (cumulative).

Response: <NR2> us

Example: FETC:BLUe:EMOD:MAX:INIT:FERR:CUMu?

FETC:BLUe:MEAS1:EMOD:MAX:INIT:FERR:CUMu?

FETC:BLUetooth[:MEAS<i>]:EModulation:MAX:TOTal:FERRor:BURSt?

Description: Queries the maximum total frequency error of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:MAX:TOTal:FERR:BURSt?

FETC:BLUe:MEAS1:EMOD:MAX:TOTal:FERR:BURSt?

FETC:BLUetooth[:MEAS<i>]:EModulation:MAX:TOTal:FERRor :CUMulative?

Description: Queries the maximum total frequency error of the EDR modulation (cumulative).

Response: <NR2> us

Example: FETC:BLUe:EMOD:MAX:TOTal:FERR:CUMu?

FETC:BLUe:MEAS1:EMOD:MAX:TOTal:FERR:CUMu?

FETC:BLUetooth[:MEAS<i>]:EModulation:DEVM:MAX:RMS:BURSt?

Description: Queries the maximum RMS of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:DEVM:MAX:RMS:BURSt?

FETC:BLUe:MEAS1:EMOD:DEVM:MAX:RMS:BURSt?

FETC:BLUetooth[:MEAS<i>]:EModulation:DEVM:MAX:RMS:CUMulative?

Description: Queries the maximum RMS of the EDR modulation (cumulative).

Response: <NR2> us

Example: FETC:BLUe:EMOD:DEVM:MAX:RMS:CUMu?

FETC:BLUe:MEAS1:EMOD:DEVM:MAX:RMS:CUMu?

FETC:BLUetooth[:MEAS<i>]:EModulation:DEVM:PEAK:BURSt?

Description: Queries the DEVM peak of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:DEVM:PEAK:BURSt?

FETC:BLUe:MEAS1:EMOD:DEVM:PEAK:BURSt?

FETC:BLUetooth[:MEAS<i>]:EModulation:DEVM:PEAK:CUMulative?

Description: Queries the DEVM peak of the EDR modulation (cumulative).

Response: <NR2> us

Example: FETC:BLUe:EMOD:DEVM:PEAK:CUMulative?

FETC:BLUe:MEAS1:EMOD:DEVM:PEAK:CUMulative?

FETC:BLUetooth[:MEAS<i>]:EModulation:DEVM:99%?

Description: Queries the DEVM 99% of the EDR modulation (burst)

Response: <NR2> us

Example: FETC:BLUe:EMOD:DEVM:99%?

FETC:BLUe:MEAS1:EMOD:DEVM:99%?

FETC:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:AVERage:DB?

Description: Queries the origin offset average (dB) of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:ORIGin:OFFS:AVER:db?

FETC:BLUe:MEAS1:EMOD:ORIGin:OFFS:AVER:db?

FETC:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:AVERage :PERCentage?

Description: Queries the origin offset average of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:ORIGin:OFFS:AVER:PERC?

FETC:BLUe:MEAS1:EMOD:ORIGin:OFFS:AVER:PERC?

FETC:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MAX:DB?

Description: Queries the origin offset maximum (dB) of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:ORIGin:OFFS:MAX:db?

FETC:BLUe:MEAS1:EMOD:ORIGin:OFFS:MAX:db?

FETC:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MAX :Percentage?

Description: Queries the origin offset maximum (%) of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:ORIGin:OFFS:MAX:PERC?

FETC:BLUe:MEAS1:EMOD:ORIGin:OFFS:MAX:PERC?

FETC:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MIN:DB?

Description: Queries the origin offset minimum (dB) of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:ORIGin:OFFS:MIN:db?

FETC:BLUe:MEAS1:EMOD:ORIGin:OFFS:MIN:db?

FETC:BLUetooth[:MEAS<i>]:EModulation:ORIGin:OFFSet:MIN :PERCentage?

Description: Queries the origin offset minimum (%) of the EDR modulation (burst).

Response: <NR2> us

Example: FETC:BLUe:EMOD:ORIGin:OFFS:MIN:PERC?

FETC:BLUe:MEAS1:EMOD:ORIGin:OFFS:MIN:PERC

FETC:BLUetooth[:MEAS<i>]:MODCharacteristics:AVG:F2:F1:RATio?

Description: Queries the average F2 vs. F1 ratio of the modulation characteristics.

Response: <NR2> us

Example: FETC:BLUe:MODC:AVG:F2:F1:RATio?

FETC:BLUe:MEAS1:AVG:F2:F1:RAT?

FETC:BLUetooth[:MEAS<i>]:MODCharacteristics:F1:AVG?

Description: Queries the F1 average of the modulation characteristics.

Response: <NR2> us

Example: FETC:BLUe:MODC:F1:AVG?

FETC:BLUe:MEAS1:MODC:F1:AVG?

FETC:BLUetooth[:MEAS<i>]:MODCharacteristics:F1:PCOunt?

Description: Queries the F1 packet count of the modulation characteristics.

Response: <NR2> us

Example: FETC:BLUe:MODC:F1:PCO?

FETC:BLUe:MEAS1:MODC:F1:PCO?

FETC:BLUetooth[:MEAS<i>]:MODCharacteristics:F2:AVG?

Description: Queries the F2 average of the modulation characteristics.

Response: <NR2> us

Example: FETC:BLUe:MODC:F2:AVG?

FETC:BLUe:MEAS1:MODC:F2:AVG?

FETC:BLUetooth[:MEAS<i>]:MODCharacteristics:F2:MPRate?

Description: Queries the F2 maximum pass rate of the modulation characteristics.

Response: <NR2> us

Example: FETC:BLUe:MODC:F2:MPRate?

FETC:BLUe:MEAS1:MODC:F2:MPR?

FETC:BLUetooth[:MEAS<i>]:MODCharacteristics:F2:PCOunt?

Description: Queries the F2 packet count of the modulation characteristics.

Response: <NR2> us

Example: FETC:BLUe:MODC:F2:PCO?

FETC:BLUe:MEAS1:MODC:F2:PCO?

FETC:BLUetooth[:MEAS<i>]:POWer:AVERage?

Description: Queries the average power of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:AVERage?

FETC:BLUe:MEAS1:POW:AVER?

FETC:BLUetooth[:MEAS<i>]:POWer:BANDwidth?

Description: Queries the -20 dB bandwidth of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:BANDwidth?

FETC:BLUe:MEAS1:POW:BAND?

FETC:BLUetooth[:MEAS<i>]:POWer:DENSity?

Description: Queries the density of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:DENSity?

FETC:BLUe:MEAS1:POW:DENS?

FETC:BLUetooth[:MEAS<i>]:POWer:EDR:TPOWer?

Description: Queries the EDR relative Tx power of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:EDR:TPOWer?

FETC:BLUe:MEAS1:POW:EDR:TPOW?

FETC:BLUetooth[:MEAS<i>]:POWer:GFSK:AVERage?

Description: Queries the GFSK average power of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:EDR:TPOWer?

FETC:BLUe:MEAS1:POW:EDR:TPOW?

FETC:BLUetooth[:MEAS<i>]:POWer:OBW?

Description: Queries the occupied bandwidth of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:OBW?

FETC:BLUe:MEAS1:POW:OBW?

FETC:BLUetooth[:MEAS<i>]:POWer:PEAK?

Description: Queries the peak power of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:PEAK?

FETC:BLUe:MEAS1:POW:PEAK?

FETC:BLUetooth[:MEAS<i>]:POWer:PSK:AVERage?

Description: Queries the PSK average power of the power/spectrum measurement.

Response: <NR2> us

Example: FETC:BLUe:POWer:PSK:AVERage?

FETC:BLUe:MEAS1:POW:PSK:AVER?

CONFigure commands

CONFigure
:BLUetooth
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ANALysis
:BURSt
:CDELay
:FEDGe
:THReshold
:REDGe
:THReshold
:TIME
:INTegration
:SKIP
:MOFF
:MON
:PRETrigger
:EDBLocks?
:LENGth?
:PAYLoad
:BPATtern?
:LENGth?
:PTYPe?

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:CDELay

Description: Sets the comparator delay of the Bluetooth burst configuration.

Parameters: <NR1>

Example: CONF:BLUe:MEAS1:ANAL:BURS:CDEL 100

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:FEDGe:THReshold

Description: Sets the falling edge threshold of the Bluetooth burst configuration.

Parameters: <NR2> dB

Example: CONF:BLUe:MEAS1:ANAL:BURS:FEDG:THR 15.00 dB

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:REDGe:THReshold

Description: Sets the rising edge threshold of the Bluetooth burst configuration.

Parameters: <NR2> dB

Example: CONF:BLUe:MEAS1:ANAL:BURS:REDG:THR 15.00 dB

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:TIME:INTegration

Description: Sets the integration time of the Bluetooth burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:BLU:MEAS1:ANAL:BURS:TIME:INT 0.200 us

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:TIME:INTegration:SKIP

Description: Sets the integration skip time of the Bluetooth burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:BLU:MEAS1:ANAL:BURS:TIME:INT:SKIP 0.150 us

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:TIME:MOFF

Description: Sets the minimum ‘off’ time of the Bluetooth burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:BLU:MEAS1:ANAL:BURS:TIME:MOFF 20.000 us

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:TIME:MON

Description: Sets the minimum ‘on’ time of the Bluetooth burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:BLU:MEAS1:ANAL:BURS:TIME:MON 20.000 us

CONFigure:BLUetooth:MEAS<i>:ANALysis:BURSt:TIME:PRETrigger

Description: Sets the pre-trigger time of the Bluetooth burst configuration.

Parameters: <NR2>

Valid units: ns | us | ms | s

Example: CONF:BLU:MEAS1:ANAL:BURS:TIME:PRET 1.000 us

CONFigure:BLUetooth:MEAS<i>:ANALysis:EDBLocks?

Description: Sets the EDR blocks to analyze the Bluetooth system configuration.

Parameters: <NR1>

Example: CONF:BLUe:MEAS1:ANAL:EDBL?

CONF:BLUe:MEAS1:ANAL:EDBLocks 2744

CONFigure:BLUeTOOTH:MEAS<i>:ANALysis:LENGth?

Description: Sets the search length of the Bluetooth system configuration.

Parameters: <NR2>

Valid units: us | ns | s | ms

Example: CONF:BLUe:MEAS1:ANAL:LENG 10000.000 us

CONFigure:BLUetooth:MEAS<i>:ANALysis:PAYLoad:LENGth?

Description: Sets the payload length of the Bluetooth system configuration.

Parameters: <NR1>

Example: CONF:BLUe:MEAS1:ANAL:PAYL:LENG?

CONF:BLUe:MEAS1:ANAL:PAYL:LENG 27

CONFigure:BLUetooth:MEAS<i>:ANALysis:PTYPe?

Description: Sets the packet type of the Bluetooth system configuration.

Parameters: <CPD>

Valid values: DH1 | DH3 | DH5 | 2-DH1 | 2-DH3 | 2-DH5 | 3-DH1 | 3-DH3 | 3-DH5 | 2-EV3 | 2-EV5

Example: CONF:BLUe:MEAS1:ANAL:PTYPe?

CONF:BLUe:MEAS1:ANAL:PTYPe DH3

TRACe commands

READ
:BLUetooth
[:MEASurement<i>]
:BSPectrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:GFVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PSKConstellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PSKDvsymbol
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:PVTime
:AVERage?
[:CURRent]?
:MAXimum?
:TRACe
:AVERage?
:CPVTime
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

Burst spectrum measurement results (trace)

The following commands return the Burst Spectrum trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:BSPectrum:MINimum?

The Burst Spectrum trace contains Frequency (MHz) in the x axis and Power (dBm) in the y axis

Frequency range: -1000 MHz to 1000 MHz

Power range: -100 dBm to 0 dBm

Example: READ:BLU:MEAS1:TRAC:BSP?

GFSK frequency vs. time (trace)

The following commands return the GFSK Frequency vs. Time trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime:[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:GFVTime:MINimum?

The GFSK Frequency vs. Time trace contains Time in the x axis and Frequency in the y axis.

Time range: 0 to 1000

Frequency range: -0.5 to + 0.5

Example: READ:BLU:MEAS1:TRAC:GFVT?

PSK constellation (trace)

The following commands return the PSK Constellation trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation[:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKConstellation:MINimum?

The PSK Constellation trace contains I in the x axis and Q in the y axis.

I range: -3 I to 3 I

Q range: -3 Q to 3 Q

Example: READ:BLU:MEAS1:TRAC:PSKC?

PSK DEVM vs. symbol (trace)

The following commands return the PSK DEVM vs. Symbol trace results. The results of the current, average, maximum and minimum traces can be retrieved.

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol:AVERage?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol [:CURRent]?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol:MAXimum?

READ[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol:MINimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol:AVERage?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol:[:CURRent]?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol:MAXimum?

FETCh[:<SYSTEMNAME>][:MEAS<i>]:TRACe:PSKDvsymbol:MINimum?

The PSK DEVM vs. Symbol trace contains Symbol in the x axis and DEVM in the y axis.

Symbol range: 0 to 30

DEVM range: -1000 to + 1000

Example: READ:BLU:MEAS1:TRAC:PSKD:CURR?
FETC:BLU:MEAS1:TRAC:PSKD:CURR?

TRIGger commands

TRIGger
:BLUetooth
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:SOURce
:DELay
:EXTernal
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

TDSCDMA COMMANDS

READ commands

```
READ
    :TDSCdma
        [:MEASurement<i>]
            :ACLR?
                :LEVel?
                    :CENTer?
                    :LOWer?<j>
                    :UPPer?<j>
                :OFFSet?
                    :CENTer?
                    :LOWer?<j>
                    :UPPer?<j>
            :CHANnel
                :CCODe?
                :MTYPe?
                :SFACtor?
            :IQERror
                :GIMBalance
                    :DATA?
                    :MIDamble?
                :SKEW
                    :DATA?
                    :MIDamble?
            :MACCuracy
                :BMCode?
                :CHANnel
                    :THREshold?
                :DPCoding?
                :EVM
                    :PEAK
                        :DATA?
                        :MIDamble?
                    :RMS
                        :DATA?
                        :MIDamble?
                :FERRor?
                :RHO
                    :DATA?
                    :MIDamble?
                :SCODe?
                :TERror?
```

:MERRor
:PEAK
:DATA?
:MIDamble?
:RMS
:DATA?
:MIDamble?
:MMSHifts
:COUNt?
:MIDShifts?
:OBW?
:OOFFset
:DATA?
:MIDamble?
:PEAK
:ACDE
:DATA?
:MIDamble?
:CDE
:DATA?
:MIDamble?
:PERRor
:PEAK
:DATA?
:MIDamble?
:RMS
:DATA?
:MIDamble?
:POWer
:DATA?
:LDATa?
:MIDamble?
:RDATa?
:TOTal?
:SMASk
:FREQuency?
:LEVel?
:RLEVel?
:STATus?

READ:TDSC[:MEAS<i>]:MACCuracy:EVM:RMS:DATA?

Description: Starts a new measurement and retrieves the RMS value for the modulation accuracy of the error vector modulation.

Parameters: <NR2> %

Example: READ:TDSC:MACC:EVM:RMS:DATA?

READ:TDSCdma[:MEAS<i>]:MACCuracy:FERRor?

Description: Starts a new measurement and retrieves the frequency error of the modulation accuracy.

Parameters: <NR2> ppm

Example: READ:TDSC:MACC:FERR?

READ:TDSC:MEAS1:MACC:FERR?

READ:TDSC[:MEAS<i>]:MACCuracy:IQERror:GIMBalance:MIDamble?

Description: Starts a new measurement and retrieves the IQ gain imbalance of the modulation accuracy.

Parameters: <NR2> dB

Example: READ:TDSC:MACC:IQER:GIMB:MID?

READ:TDSC[:MEAS<i>]:MACCuracy:IQERror:SKEW:DATA?

Description: Starts a new measurement and retrieves the IQ skew of the modulation accuracy.

Parameters: <NR2> degree

Example: READ:TDSC:MACC:IQER:SKEW:DATA?

READ:TDSC[:MEAS<i>]:MACCuracy:PEAK:CDE?

Description: Starts a new measurement and retrieves the code domain error value for a given subcarrier

Parameters: <NR1>

Example: READ:TDSC:MACC:PEAK:CDE?

READ:TDSCdma[:MEAS<i>]:POWer:DATA?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: READ:TDSC:POWer:DATA?

READ:TDSCdma[:MEAS<i>]:POWer:LDATA?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: READ:TDSC:POWer:LDATA?

READ:TDSCdma[:MEAS<i>]:POWer:MIDamble?

Description: Starts a new measurement and retrieves the midamble power.

Parameters: <NR2>

Example: READ:TDSC:POWer:MIDamble?

READ:TDSCdma[:MEAS<i>]:POWer:RDATA?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: READ:TDSC:POWer:RDATA?

READ:TDSCdma[:MEAS<i>]:POWer:TOTal?

Description: Starts a new measurement and retrieves the total power.

Parameters: <NR2>

Example: READ:TDSC:POWer:TOTal?

READ:TDSCdma[:MEAS<i>]:MMSHifts:COUNt?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: READ:TDSC:POWer:RDATA?

READ:TDSCdma[:MEAS<i>]:MMSHifts:COUNt?

Description: Starts a new measurement and retrieves the number of midshifts.

Parameters: <NR2>

Example: READ:TDSC:MMSH:COUN?

READ:TDSCdma[:MEAS<i>]:MMSHifts:MIDShift?

Description: Starts a new measurement and retrieves the midshifts.

Parameters: <NR2>

Example: READ:TDSC:MMSHifts:MIDShifts?

FETCh commands

```
FETCh
    :TDSCdma
        [:MEASurement<i>]
            :OBW?
            :POWer
                :DATA?
                :LDATa?
                :MIDamble?
                :RDATa?
                :TOTal?
            :SMASk
                :FREQuency?
                :LEVel?
                :RLEVel?
                :STATus?
            :MMSHifts
                :ACLR?
                    :OFFSet?
                        :CENTer?
                        :LOWer?<j>
                        :UPPer?<j>
                    :LEVel?
                        :CENTer?
                        :LOWer?<j>
                        :UPPer?<j>
                :CHANnel
                    :CCOde?
                    :MTYPe?
                    :SFACtor?
                :COUNt?
                :MIDShifts?
                :MACCuracy
                    :DPCoding?
                        :BMCode?
                        :CHANnel
                            :THREshold?
                        :FERRor?
                        :SCODe?
                        :TERror?
```

```
:EVM
    :RMS
        :DATA?
        :MIDamble?
    :PEAK
        :DATA?
:IQERror
    :GIMBalance
        :DATA?
        :MIDamble?
    :OOFFset
        :DATA?
        :MIDamble?
    :SKEW
        :DATA?
        :MIDamble?
:MERRor
    :PEAK
        :DATA?
        :MIDamble?
    :RMS
        :DATA?
        :MIDamble?
:PEAK
    :ACDE
        :DATA?
        :MIDamble?
    :CDE
        :DATA?
        :MIDamble?
:PERRor
    :PEAK
        :DATA?
        :MIDamble?
    :RMS
        :DATA?
        :MIDamble?
:RHO
    :DATA?
    :MIDamble?
        :MIDamble?
```

FETCh:TDSC[:MEAS<i>]:MACCuracy:EVM:RMS:DATA?

Description: Starts a new measurement and retrieves the RMS value for the modulation accuracy of the error vector modulation.

Parameters: <NR2> %

Example: FETCh:TDSC:MACC:EVM:RMS:DATA?

FETCh:TDSCdma[:MEAS<i>]:MACCuracy:FERRor?

Description: Starts a new measurement and retrieves the frequency error of the modulation accuracy.

Parameters: <NR2> ppm

Example: FETCh:TDSC:MACC:FERR?

FETCh:TDSC:MEAS1:MACC:FERR?

FETCh:TDSC[:MEAS<i>]:MACCuracy:IQERror:GIMBalance:MIDamble?

Description: Starts a new measurement and retrieves the IQ gain imbalance of the modulation accuracy.

Parameters: <NR2> dB

Example: FETCh:TDSC:MACC:IQER:GIMB:MID?

FETCh:TDSC[:MEAS<i>]:MACCuracy:IQERror:SKEW:DATA?

Description: Starts a new measurement and retrieves the IQ skew of the modulation accuracy.

Parameters: <NR2> degree

Example: FETCh:TDSC:MACC:IQER:SKEW:DATA?

FETCh:TDSC[:MEAS<i>]:MACCuracy:PEAK:CDE?

Description: Starts a new measurement and retrieves the code domain error value for a given subcarrier.

Parameters: <NR1>

Example: FETCh:TDSC:MACC:PEAK:CDE?

FETCh:TDSCdma[:MEAS<i>]:MMSHifts:COUNt?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: FETCh:TDSC:POWer:RDATA?

FETCh:TDSCdma[:MEAS<i>]:MMSHifts:COUNt?

Description: Starts a new measurement and retrieves the number of midshifts.

Parameters: <NR2>

Example: FETCh:TDSC:MMSH:COUN?

FETCh:TDSCdma[:MEAS<i>]:MMSHifts:MIDShift?

Description: Starts a new measurement and retrieves the midshifts

Parameters: <NR2>

Example: FETCh:TDSC:MMSHifts:MIDShifts?

FETCh:TDSCdma[:MEAS<i>]:POWer:DATA?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: FETCh:TDSC:POWer:DATA?

FETCh:TDSCdma[:MEAS<i>]:POWer:LDATA?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: FETCh:TDSC:POWer:LDATA?

FETCh:TDSCdma[:MEAS<i>]:POWer:MIDamble?

Description: Starts a new measurement and retrieves the midamble power.

Parameters: <NR2>

Example: FETCh:TDSC:POWer:MIDamble?

FETCh:TDSCdma[:MEAS<i>]:POWer:RDATA?

Description: Starts a new measurement and retrieves the power.

Parameters: <NR2>

Example: FETCh:TDSC:POWer:RDATA?

FETCh:TDSCdma[:MEAS<i>]:POWer:TOTal?

Description: Starts a new measurement and retrieves the total power.

Parameters: <NR2>

Example: FETCh:TDSC:POWer:TOTal?

CONFigure commands

CONFigure
:TDSCdma
:MEASurement<i>
:ATTenuation
:FREQuency
:CENTer
:LEVel
:MODE

For the definition/behavior of the above commands, refer to the generic section CONFIGURE commands.

:ACLR
:MODE
:OFFSet
:CENTer
:LOWer<j>
:UPPer<j>
:ANALysis
:BMCMode
:CCMode
:CTHRmode
:LENGth
:SLOT
:CHANnel
:CODE
:MTYPe
:MODE
:SFACtor
:STATus
:CODE
:BMCode
:BMCMode
:FCGRoup
:SCODe
:SDCode
:SUCode
:USPoint
:SYSTem
:CHANnel
:THREshold
:SLOT
:FREFerence
:TREFerence
:THREshold
:SYNCmode
:TSLOt
MAXUser

CONFigure:TDSC:MEAS<i>:ACLR:MODE

Description: Sets the mode of the adjacent channel power ratio.

Parameters: <CPD>

Valid values: AUTO | USER

Example: CONF:TDSC:MEAS1:ACPR AUTO

CONFigure:TDSC:MEAS<i>:ACLR:OFFSet:CENTer

Description: Sets the frequency offset for the center frequency of the adjacent channel power ratio.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:TDSC:MEAS1:ACPR:OFFS:CENT 5.00 KHz

CONFigure:TDSC:MEAS<i>:ACLR:OFFSet:LOWer<j>

Description: Sets the frequency offset for the lower level of the adjacent channel power ratio.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:TDSC:MEAS1:ACLR:OFFS:LOW1 -5.00 KHz

CONFigure:TDSC:MEAS<i>:ACLR:OFFSet:UPPer<j>

Description: Sets the frequency offset for the upper level of the adjacent channel power ratio.

Parameters: <NR2>

Valid units: Hz | KHz | MHz | GHz

Example: CONF:CDMA:MEAS1:ACPR:OFFS:UPP1 250.00 MHz

CONFigure:TDSC:MEAS<i>:ANALysis:LENGth

Description: Sets the search length of the TDSCDMA burst configuration.

Parameters: <NR2>

Valid units: ms | us | ns | s

Example: CONF:TDSC:MEAS1:ANAL:LENG 2000.000 us

CONFigure:TDSC:MEAS<i>:ANALysis:SLOT

Description: Selects the slot to be analyzed.

Parameters: <CPD>

Valid values: TS0 | TS1 | TS2 | TS3 | TS4 | TS5 | TS6 | DWPts | UWPts

Example: CONF:TDSC:MEAS1:ANAL:SLOT TS0

CONFigure:TDSC:MEAS<i>:CODE:BMCMode

Description: Sets the basic midamble code.

Parameters: <CPD>

Valid values: 0 | 1 | 2 | 3

Example: CONF:TDSC:MEAS1:CODE:BMC 2

CONFigure:TDSC:MEAS<i>:CODE:FCGroup

Description: Sets the force code group.

Parameters: <CPD>

Valid values: SULink | SDLink | SCRamble | MIDamble | ANY

Example: CONF:TDSC:MEAS1:CODE:FCG MID

CONFigure:TDSC:MEAS<i>:CODE:SCODe

Description: Sets the scramble code.

Parameters: <CPD>

Valid values: 0 | 1 | 2 | 3

Example: CONF:TDSC:MEAS1:CODE:SCOD 2

CONFigure:TDSC:MEAS<i>:CODE:SDCode

Description: Sets the sync downlink code.

Parameters: <CPD>

Valid values: 0-32

Example: CONF:TDSC:MEAS1:CODE:SUCode 30

CONFigure:TDSC:MEAS<i>:CODE:SUCode

Description: Sets the sync uplink code.

Parameters: <CPD>

Valid values: 0-255

Example: CONF:TDSC:MEAS1:CODE:SUCode 32

CONFigure:TDSC:MEAS<i>:CODE:USPoint

Description: Sets the uplink switch point.

Parameters: <CPD>

Valid values: TS1 | TS2 | TS3 | TS4 | TS5 | TS6

Example: CONF:TDSC:MEAS1:CODE:USP TS2

CONFigure:TDSC:MEAS<i>:SYSTem:SLOT:FREFerence

Description: Sets the frequency reference for the slot.

Parameters: <CPD>

Valid values: DWPts | UWPts | MIDamble

Example: CONF:TDSC:MEAS1:SYST:SLOT:FREFerence DWPts

CONFigure:TDSC:MEAS<i>:SYSTem:SLOT:THREshold

Description: Sets the threshold value for the particular slot.

Parameters: <NR2>

Valid units: dBm

Example: CONF:TDSC:MEAS1:SYST:SLOT:THREshold -30.2dBm

CONFigure:TDSC:MEAS<i>:SYSTem:SLOT:TREFerence

Description: Sets the time reference for the slot.

Parameters: <CPD>

Valid values: DWPts | UWPts

Example: CONF:TDSC:MEAS1:SYST:SLOT:TREFerence DWPts

CONFigure:TDSC:MEAS<i>:SYSTem:SYNC

Description: Sets the sync mode in the system settings.

Parameters: <CPD>

Valid values: MIDamble | DWPts | UWPts

Example: CONF:TDSC:MEAS1:SYST:SYNC MID

TRACe commands

READ
:TDSCdma
[:MEASurement<i>]
:TRACe
:ACLR
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CCDF
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CCONstellation
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CPVTime
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SMASk
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

For the definition/behavior of the above commands, refer to the generic section TRACE commands.

:CDE
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:CDP
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?
:SPECtrum
:AVERage?
[:CURRent]?
:MAXimum?
:MINimum?

TRIGger commands

TRIGger
:TDSCdma
:MEASurement<i>
:BURSt
:LEVel
:POLarity
:COUNt
:DELay
:SOURce
:EXTernal<i>
:IMMediate
:POLarity
:TYPE

For the definition/behavior of the above commands, refer to the generic section TRIGGER commands.

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