

HIGH STABILITY PRECISION OCXO MV102 WITH 5 V POWER SUPPLY

Features:

- 5V power supply
- High stability vs. temperature - up to $\pm 1 \times 10^{-9}$
- Low aging
- Low phase noise
- Ideal for GPS, CDMA, 3G applications

Frequency range: 4.0 – 10.0 MHz		
Standard Frequencies		
4.096 MHz	5.0 MHz	8.192 MHz

ORDERING GUIDE:

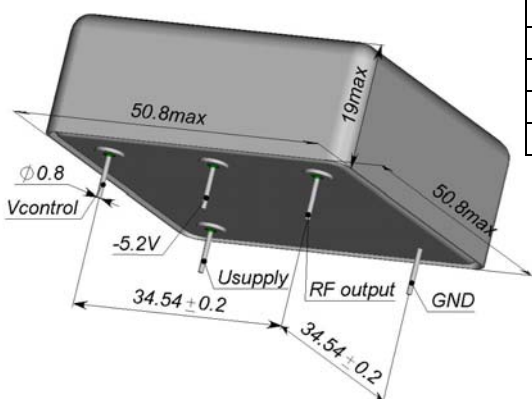
MV102 – B 1 E 10.0 MHz

Operating temperature range:	
A	-0...+55 °C
B	-10...+60 °C
C	-20...+70 °C
D	-40...+70 °C

Frequency stability vs. temperature changes:		
1		$\pm 1 \times 10^{-9}$
2		$\pm 2 \times 10^{-9}$
5		$\pm 5 \times 10^{-9}$
10		$\pm 1 \times 10^{-8}$

Aging	
G	$\pm 1 \times 10^{-7}$ /year
F	$\pm 5 \times 10^{-8}$ /year
E	$\pm 3 \times 10^{-8}$ /year

Drawing of package:



Availability of certain stability vs. operating temperature range					
		$\pm 1 \times 10^{-8}$	$\pm 5 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$
		10	5	2	1
0...+55 °C	A	A	A	A	A
- 10...+60 °C	B	A	A	A	A
- 20...+70 °C	C	A	A	A	C
-40...+70 °C	D	A	C	C	NA

Availability of certain aging values for certain frequencies				
		5.0 MHz	8.192 MHz	10.0 MHz
$\pm 1 \times 10^{-7}$ /year	G	A	A	A
$\pm 5 \times 10^{-8}$ /year	F	A	A	A
$\pm 3 \times 10^{-8}$ /year	E	A	A	C

A- available, NA – not available, C – consult factory

Output	SIN
Level	>225 mV (0dBm)
Load	50 Ohm ±5%
Harmonic suppression	>30dBc
Phase noise, typical (for 10 Mhz) @ 1 Hz	<-80 dBc/Hz
10 Hz	<-100 dBc/Hz
100 Hz	<-120 dBc/Hz
1000 Hz	<-145 dBc/Hz
10000 Hz	<-150 dBc/Hz

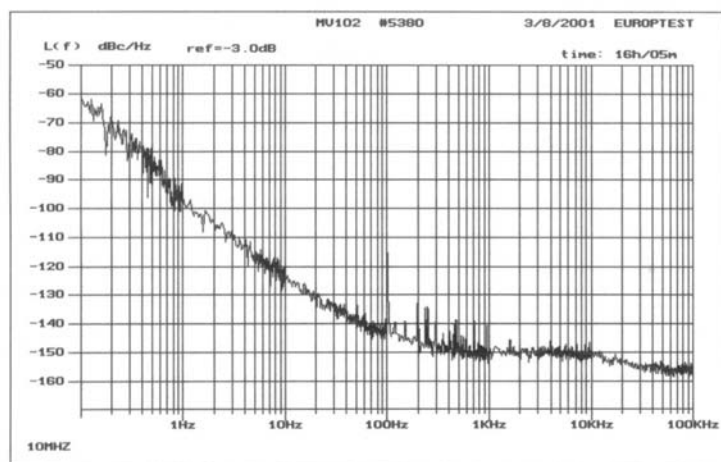
Short term stability per 1 sec, typical	< 1×10^{-11}
Frequency stability vs. load changes	< $\pm 5 \times 10^{-10}$
Frequency stability vs. power supply changes	< $\pm 5 \times 10^{-10}$
Warm-up time with accuracy of $\pm 5 \times 10^{-8}$	<15 min
Power supply	5V ±5%
Steady state current consumption @ 25°C	< 500 mA
Peak current consumption during warm-up @ 25 °C	<1.2 A
Frequency pulling range	> $\pm 5.0 \times 10^{-7}$
with external voltage range	0...+4.5 V
with external potentiometer	20 kOhm
Reference voltage	+4.5V
Slope	Negative



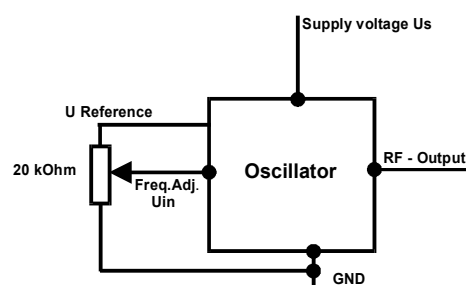
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Typical Phase Noise for 10 MHz:



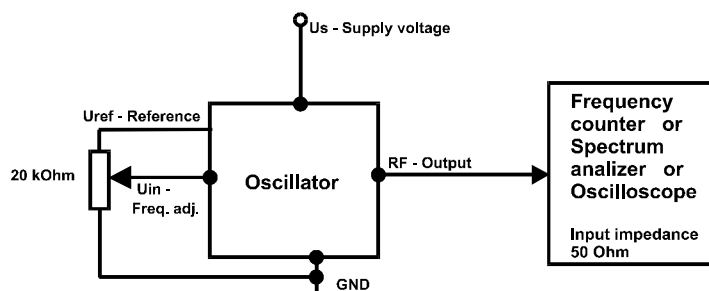
Frequency adjustment:



Mechanical characteristics:

Vibrations	
Frequency range	10-200 Hz
Acceleration	5g
Shock	
Acceleration	15 g
Duration	3±1 mc
Humidity @ 25 °C	98%
Storage temperature range	-55...+85 °C

Test circuit:



AVAILABLE ON REQUEST:

- modification with internal mechanical trimmer;
 - modification with ECL output and internal frequency multiplication with available frequencies up to 100 MHz;
 - modification with 12 V power supply;
- Please contact Morion, Inc. for any of the above options.

Due to continuous development and improvement Morion, Inc. reserves the right to modify design or specifications of its products without prior notice



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Status: October 2001