Quick Fact Sheet
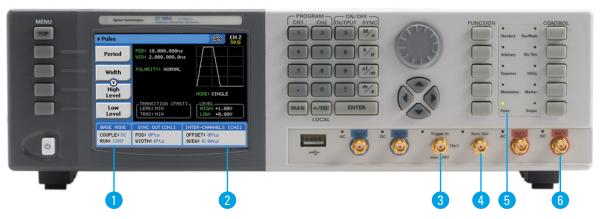
Agilent 81180A Arbitrary Waveform Generator

1 GHz modulation bandwidth/channel and 12 bit vertical resolution

1. GUI
2. Up to 64 MSa memory with advanced sequencing
3. Trigger input to control sequence advance
4. Synchronization output for single or multiple TTL pulses
5. Function generator for test set ups @ your fingertips
6. 1 or 2 differential channels

- High bandwidth: 1 GHz modulation bandwidth/ channel, 2 GHz I/Q modulation bandwidth and 1.5 GHz carrier frequency

- Reliable and repeatable measurements through best dynamic range and low harmonic distortion. Markers don't reduce DAC resolution.

- 2 Vpp into 50 Ω For many test cases and devices.

- 1, 2 or 4 channels. Combine 2 channels phase coherent or use them as two independent instruments in a single box. Two instruments can be combined to a 4 channel instrument.

- 3 software selectable amplifier optimized for different applications requiring different signal characteristics.

- Advanced sequencing for best usage of 64 MSa for real-world signals.

- Dynamic sequence control let your application control the waveform – in real time.

- 10 pre-defined waveforms speed up your measurements.

Essential specifications

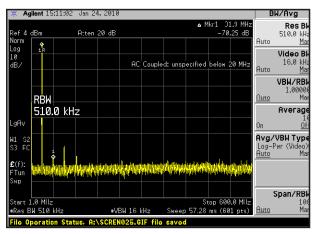| Option	Description
Max. sample rate	10 MS/s to 4.2 GS/s (variable)
Resolution	12 bit
Sample memory	16/64 MSa
IQ amplifier	• 2 GHz I/Q modulation bandwidth • Differential, DC coupled • Amplitude: fixed 1 Vpp • SFDR: 66 dBc
Maximum bandwidth amplifier	• 1.5 GHz bandwidth • Singled-ended, AC coupled • SFDR > 60 dBc
Time domain amplifier	• Differential, DC coupled • Variable amplitude up to diff. 4 Vpp
Sequencing	• 16 k segments, loops, jumps, 32 k • Sequence steps, 256 scenarios, • 8-bit dynamic sequence control input
Software	• MatLab, LabView, C/C++/C# • Signal Studio[1] (Pulse builder/ Multione)

1. Available early 2012

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Choose your hardware

Option	Description
116	1 channel, 16 MSa memory
216	2 channel, 16 MSa memory
264	2 channel, 64 MSa memory
SYN	Synchronization cable to build up a 4 channel instrument out of two 81180A
F4G	Reconstruction filter set for 4 Gsa/s – 1 channel

Spurious performance of 81180A
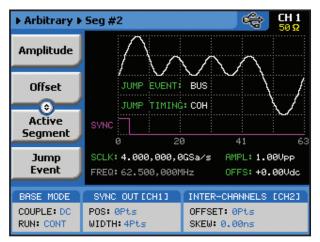
Recommended service options

Additional two years of Return-to-Agilent warranty
Additional two years of Return-to-Agilent calibrations
For more information go to **www.agilent.com/find/removealldoubt**
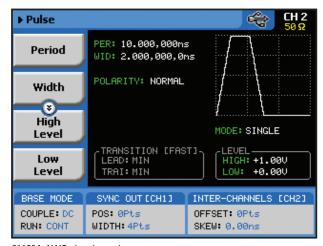
www.agilent.com/find/81180

Typical Applications

- Wireless standards with > 1 GHz modulation BW (WiHD, WiGig, Bluetooth 2.0)

- RF environment simulation up to 1.5 GHz (e.g. DVB-T/H, T-DMB)

- UWB up to 2 GHz modulation BW

- Software Defined Radio

- Satellite

- Radar

- General purpose function generator

- Education

81180A AWG showing arbitrary waveform

81180A AWG showing pulse

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