

# PLG series Signal Generators

- Frequency range from 25 MHz to 6/12/20 GHz
- Full functionality of benchtop lab generators
- Modulation: AM, FM, PM, PuIM
- Power range from -40 dBm to +10 dBm
- Portable design
- Power supply and control via USB interface



## Description

PLG series signal generator produce RF and micro-wave (MW) signals at frequency range from 25 MHz to 6/12/20 GHz (1 Hz step), with power level from -40 dBm to +10 dBm (1 dB step). Four types of analog modulation are available: AM, FM, PM, and PuIM. The PLG generators simplify measurement cases for development, mass-production and verification of RF and MW products. It is an ideal solution for wireless communications, aerospace and defense, computer, automotive, etc.

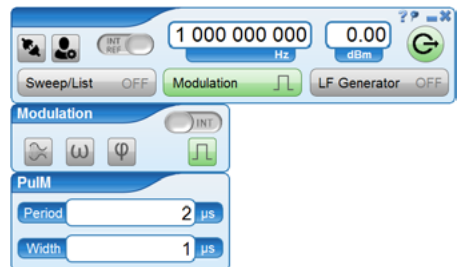
## Main Capabilities:

- Several modes of operation: continuous wave (CW), swept signal, and analog modulation
- Frequency or power step/list sweep modes for device characterization or calibration
- Modern graphical user interface for fast and intuitive operation
- AM, FM, PM or PuIM modulation by built-in or external modulation source
- Continuous low-frequency (LF) signal generation of standard shape (sine, saw tooth, triangle, square, noise)

- SCPI control commands make it simple to integrate PLG generators into other automated test and measurements systems.

## Software

- User-friendly interface
- List editor
- Custom profiles save/load for different measurement set-ups



## Specifications

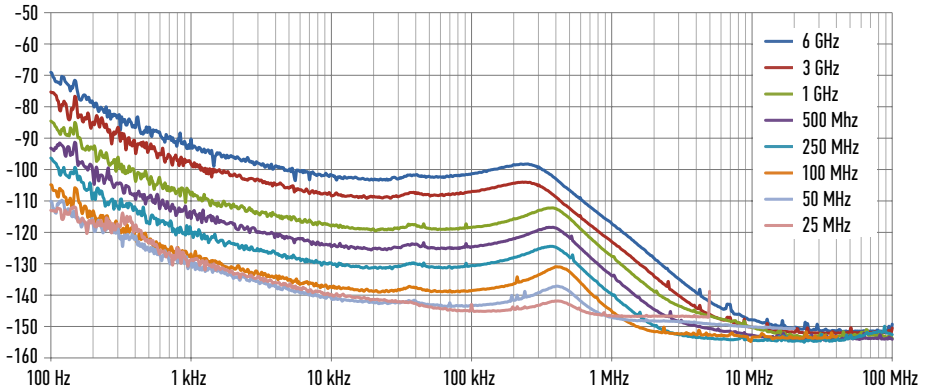
### Key measurement specifications

	PLG06	PLG12	PLG20
Frequency range	25 MHz ... 6 GHz	25 MHz ... 12 GHz	25 MHz ... 20 GHz
Frequency step	1 Hz		
Power level range	-40 ... +10 dBm		
Power level step	1 dB		
Power level accuracy	±1 dB	±2 dB	±2 dB
<b>SSB Phase noise at offset from 1 GHz carrier of</b>			
1 kHz	-112 dBc/Hz	-95 dBc/Hz	-108 dBc/Hz
10 kHz	-122 dBc/Hz	-112 dBc/Hz	-117 dBc/Hz
100 kHz	-118 dBc/Hz	-110 dBc/Hz	-113 dBc/Hz
1 MHz	-140 dBc/Hz	-115 dBc/Hz	-128 dBc/Hz
10 MHz	-151 dBc/Hz	-137 dBc/Hz	-148 dBc/Hz
Non-harmonics	<-60 dBc		
Harmonics, max (typ.)	-25 dBc (-35 dBc)		-20 dBc (-35 dBc)
<b>Analog modulations</b>			
Modulation types	AM, FM, PM, PuLM from built-in\ external source		
AM, PM, FM frequency range	0 (100 Hz for FM)...100 kHz		
Modulation signal shape	Defined by external source or built-in LF generator		
AM depth	0 ... 96%		1 ... 70%
PM deviation	0 ... 3 rad		
FM deviation	0 ... 300 Hz		
<b>Pulse modulation</b>			
Pulse repetition period	2 μs ... 32 ms for built-in source >100 ns for external source		
Pulse width	1 μs ... 32 ms for built-in source >40 ns for external source		
On/off ratio	50 dB		
Rise/fall times	<10 ns		
<b>Low-frequency output</b>			
Waveforms	Sine, sawtooth, triangle, square, noise		
Frequency range	0 ... 1 MHz (500 kHz for sawtooth, triangle, square)		
Frequency step	1.5 Hz		
Amplitude range	10 mV ... 3 V		
Amplitude accuracy	5% or 2 mV whichever is greater		

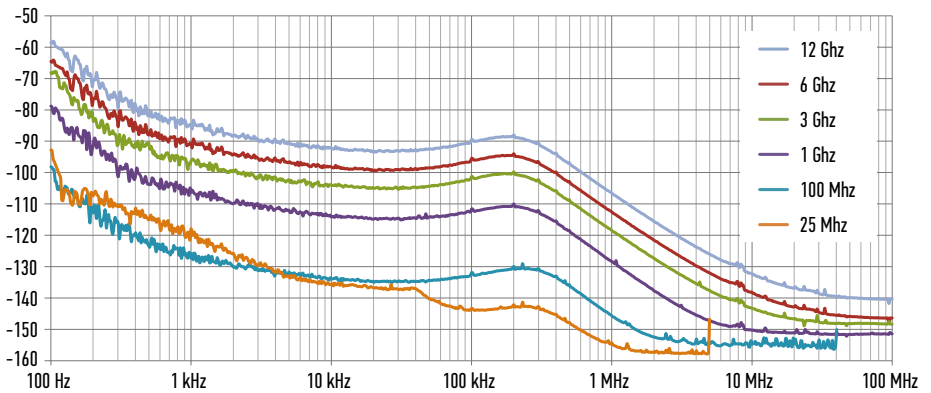
## Key measurement specifications

	PLG06	PLG12	PLG20
<b>Sweep</b>			
Operating modes	Frequency or power sweep Arbitrary list		
Number of points	501		
Triggering	External with reference to rise/fall; clock bus; internal timer		
Switching time	<100 $\mu$ s	<200 $\mu$ s	
<b>Reference oscillator</b>			
Frequency	10 MHz		
Thermal instability	$\pm 1 \times 10^{-6}$		
Aging	$\pm 1 \times 10^{-6}$ /year		
Output impedance	50 Ohm		
Output power	>0 dBm		
External reference oscillator frequency	10 MHz		
External reference signal lock range	$\pm 5 \times 10^{-6}$		
Input impedance	50 Ohm		
External reference power range	0...10 dBm		
<b>Connector types</b>			
RF output	SMA, Type N male or female		
LFG, REF, Trigger, Sync outputs	MCX female		
Power supply and control	USB, Mini-B		

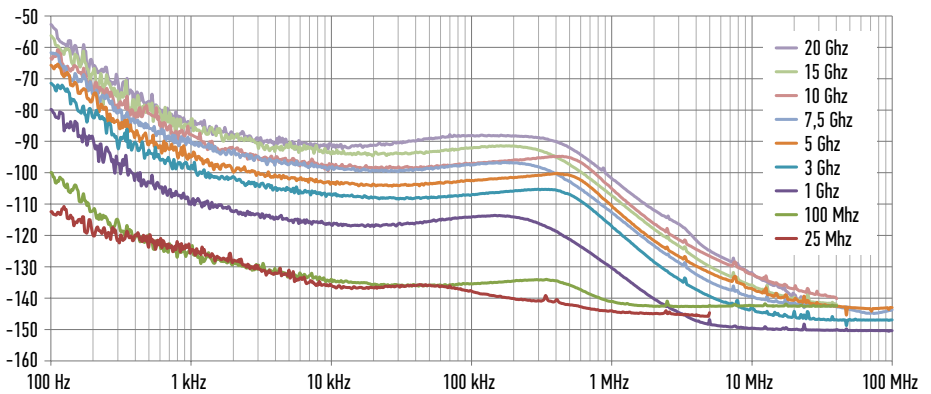
PLG06 phase noise, dBc/Hz



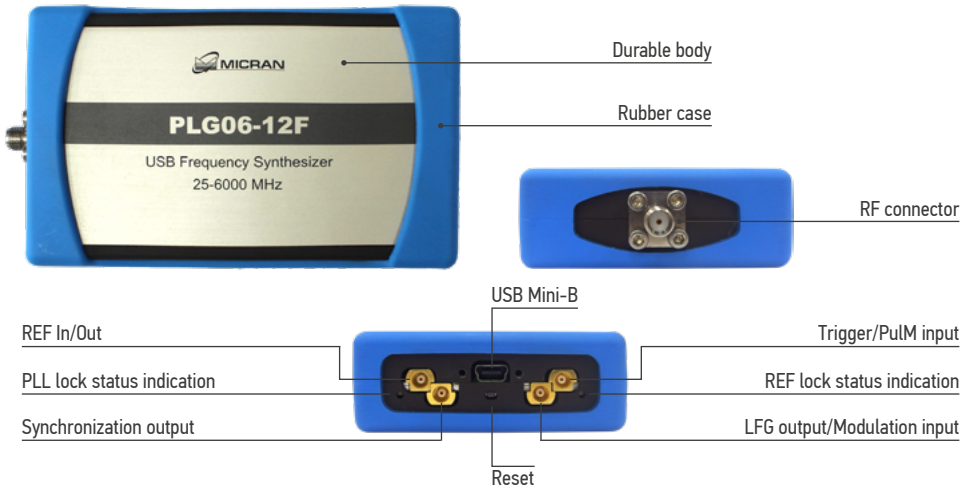
PLG12 phase noise, dBc/Hz



PLG20 phase noise, dBc/Hz



## External View



## Ordering Information



### Basic unit

	PLG06-11F	PLG06-11M	PLG06-12F	PLG06-12M	PLG12-12F
RF Output	Type N	Type N male	SMA female	SMA male	SMA female

### Standard set

Torque Wrenches	KT-4	KT-4	KT-2	KT-2	KT-2
MCX-BNC Cable Assemblies	4 pcs, 0.8 m				
USB Cable Assembly	Type A – Mini-B, 1.2 m				
Coaxial Adapters Kit	PK2-18-11-11 PK2-18-11-13 PK2-11-13R	PK2-18-11R-11R PK2-18-11R-13 PK2-18-11R-13R	PK2-18-11-13 PK2-18-11R-13 PK2-20-13-13	PK2-18-11-13R PK2-18-11R-13R PK2-20-13R-13R	PK2-18-11-13 PK2-18-11R-13 PK2-20-13-13

Additional adapters, attenuators, cable assemblies could be added upon a request.