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PLG-series signal generators
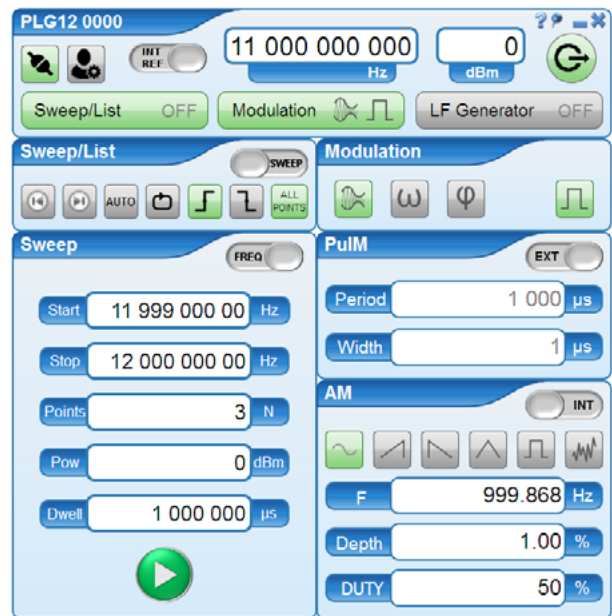
— Frequency range 25 MHz ...6/12/20 GHz

— Full-function labarotary generator

— Analog modulations

— Output power range from −40 to +10 dBm

— Compact and light

— Power supply and control via USB 2.0/3.0

PLG signal generator creates harmonic signals with frequency tuning range from 25 MHz to 6/12/20 GHz with 1 Hz step and power tuning range from −40 to −10 dBm with 1 dB step. The output signal can be modulated by an internal or external source.

The PLG signal generator is widely used for communication, navigation, and instrumentation applications.

— CW signal generation with stepped frequency and power tuning.

— Frequency and power sweep, list with predefined trigger source.

— Modulated CW signal generation with internal or external modulations source.

— CW low frequency and standard shapes signal generation with stepped frequency and amplitude tuning.

— SCPI command system ensures the flexible embedding in complex systems.
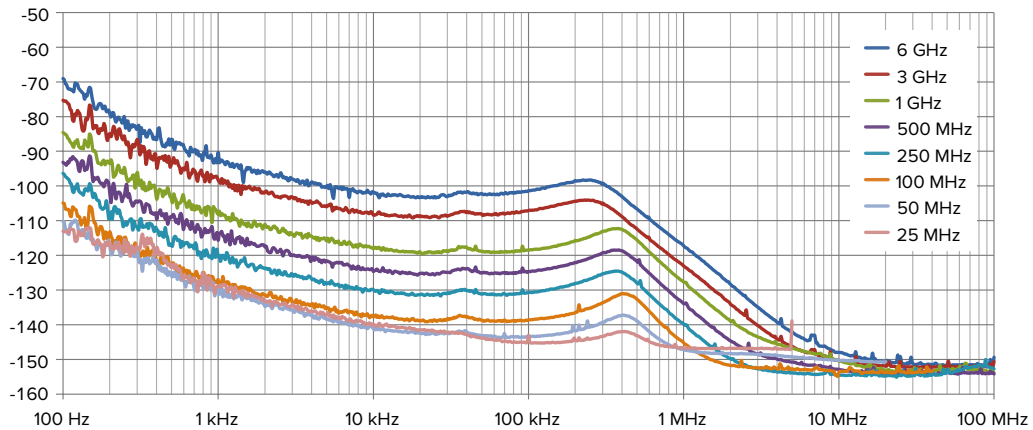

Software

— Easy to use

— List editor, capability to load/save list in .csv format
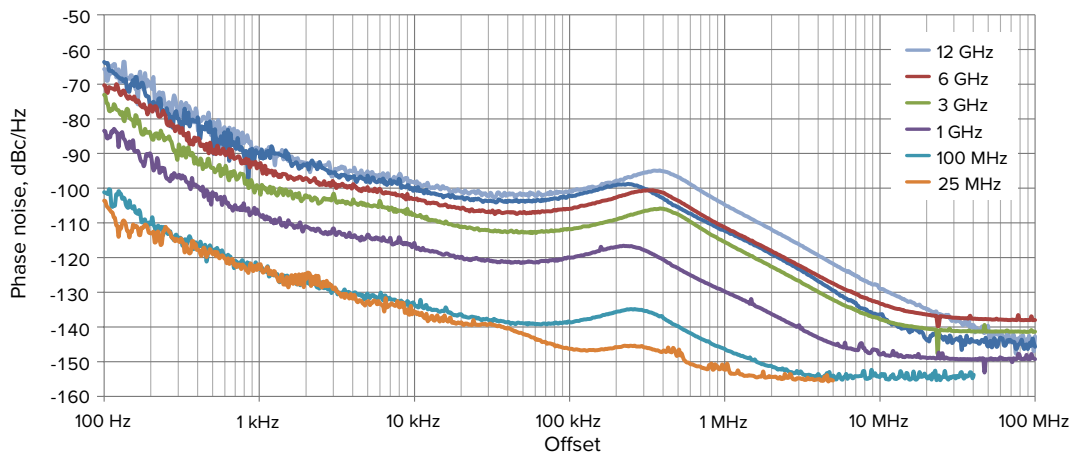
— Preset save and load

Specifications

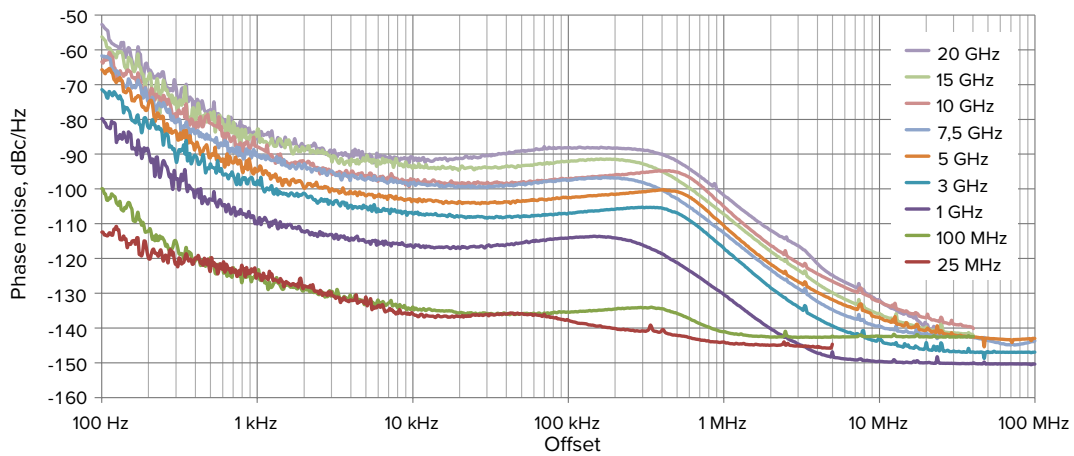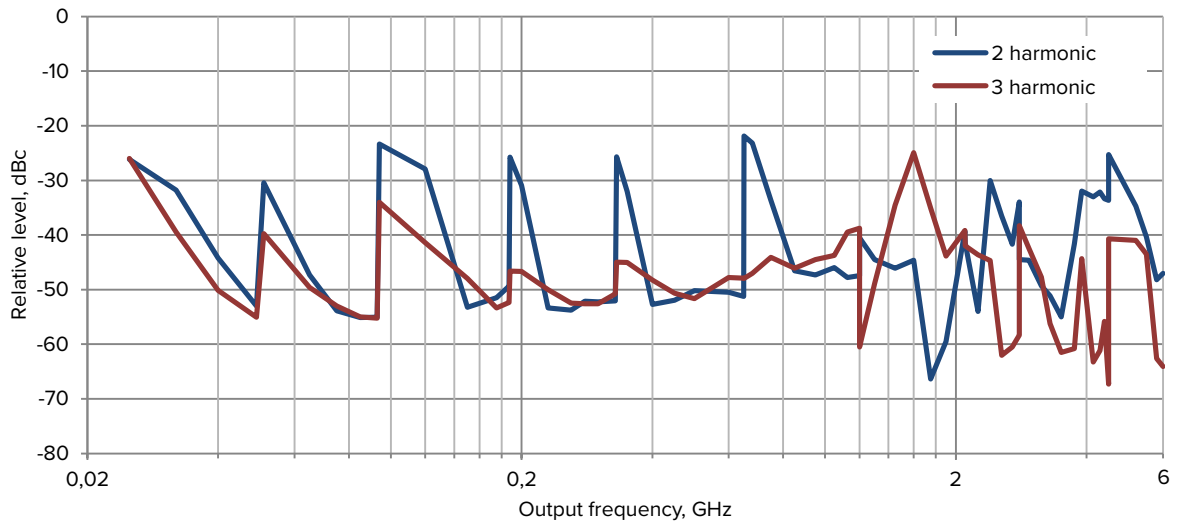|	PLG06	PLG12	PLG20
Operating frequency range	25 MHz …6 GHz	25 MHz …12 GHz	25 MHz …20 GHz
Frequency step, Hz	1		
Power level range, dBm	−40…+10		
Power level step, dB	1		
Power level accuracy, dB	± 1	± 2	± 2
SSB Phase noise,dBc/Hz @ offset from 1 GHz carrier of			
1 kHz	−104	−104	−104
10 kHz	−114	−114	−114
100 kHz	−112	−112	−112
1 MHz	−125	−125	−125
Non-harmonics, dBc	< −60		
Harmonics, dBc, max.	−20		
Subharmonic level, dBc	no	−45	−50 (5…20 GHz)
MW modulations			
Modulation types	AM, FM, PM, PulM from built-in\ external source		
AM, PM, FM frequency range	0 (400 Hz for FM)…100 kHz		
Modulation signal shape	Defined by external source or built-in LF generator		
AM depth, %	1…96	1…70	
PM deviation	0.002…1 rad (1 GHz)		
FM deviation	0.2…100 Hz (1 GHz)		
Pulse repetition period	2 µs …3.2768 ms for built-in source > 100 ns for external-source		
Pulse width	1 µs …3.2767 ms for built-in source > 40 ns for external-source		
On/off ratio, dB, min.	50		
Rise/fall times, ns	< 10		
Low-frequency output			
Waveforms	Sine, sawtooth, triangle, square, pulse, noise		
Frequency range	0…500 kHz (1 MHz for sine)		
Frequency step	1.5 Hz		
Amplitude range	6 mV …3 V		
Amplitude accuracy, mV	6		
Sweep			
Operating modes	Frequency and power sweep, list		
Number of points	501		
Triggering	External with reference to rise/fall; clock bus; internal timer		
Switching time, µs	< 100	< 200	
Reference oscillator			
Frequency, MHz	10		
Thermal instability	$< 10^{-6}$		
Aging	$< 10^{-6}$ / year		
External reference oscillator frequency, MHz	10…100 with 10 MHz step		
Output impedance, Ohm	50		
External reference signal lock range	$< 5 \times 10^{-6}$		
Output power, dBm	> 0		
External reference power range, dBm	0…10		
Input impedance, Ohm	50		
Connector types			
RF output	Type N, SMA	Type N, 3.5 mm	3.5 mm
LFG, REF, Trigger, Sync outputs	MCX, female		
Power supply and control	USB 2.0 Mini-B		

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PLG06 Phase noise

Legend: 6 GHz, 3 GHz, 1 GHz, 500 MHz, 250 MHz, 100 MHz, 50 MHz, 25 MHz

PLG12 Phase noise

Legend: 12 GHz, 6 GHz, 3 GHz, 1 GHz, 100 MHz, 25 MHz

PLG20 Phase noise

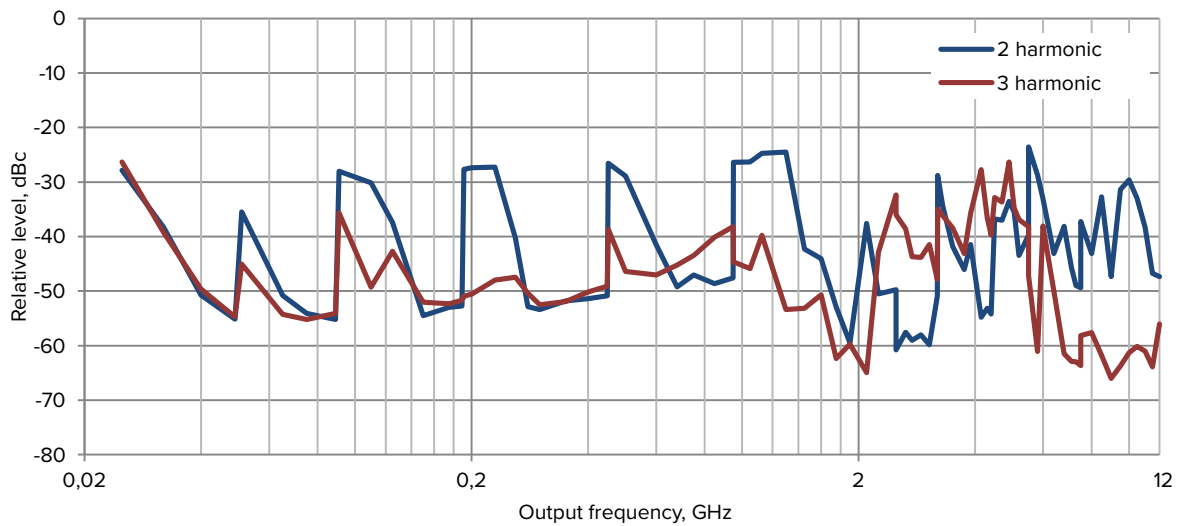Legend: 20 GHz, 15 GHz, 10 GHz, 7,5 GHz, 5 GHz, 3 GHz, 1 GHz, 100 MHz, 25 MHz
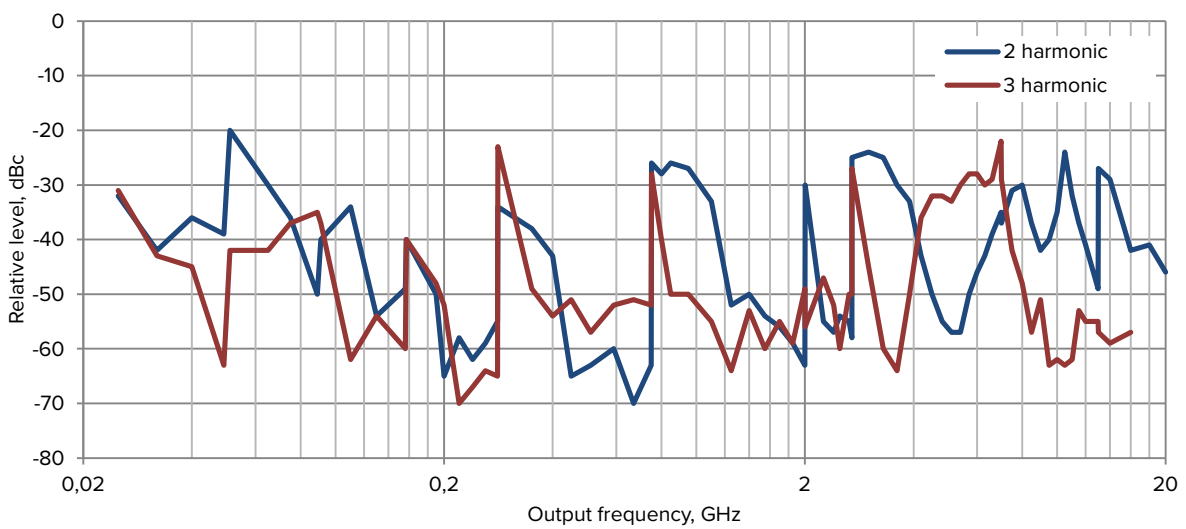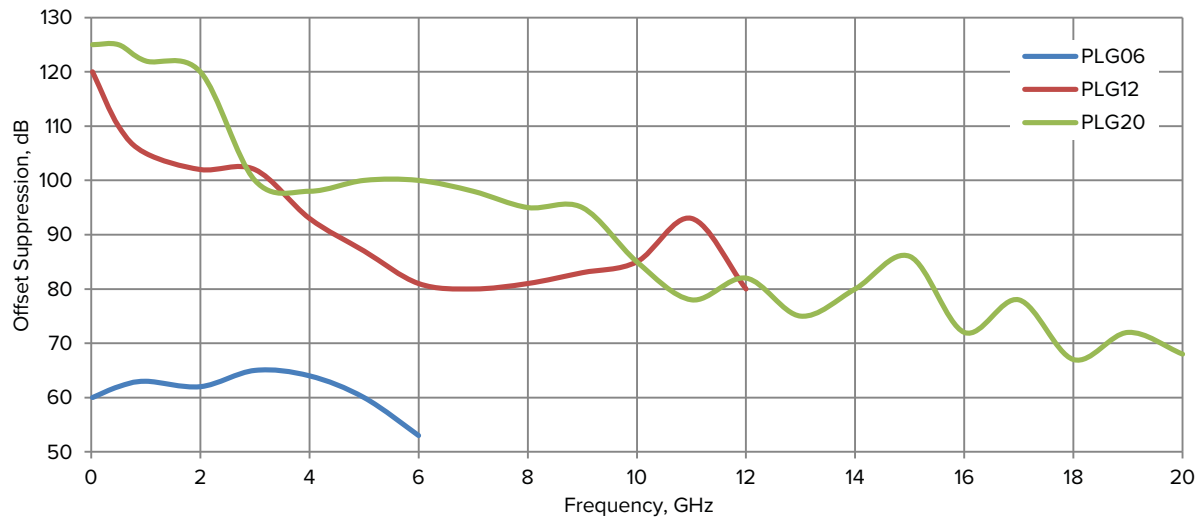
Harmonic level PLG06

Harmonic level PLG12

Harmonic level PLG20

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On/off ratio

Ordering information

Version	
PLG06-11F	Signal generator, 25 MHz ...6 GHz, connector type N (female)
PLG06-12F	Signal generator, 25 MHz ...6 GHz, connector type SMA (female)
PLG12-11F	Signal generator, 25 MHz ...12 GHz, connector type N (female)
PLG12-12F	Signal generator, 25 MHz ...12 GHz, connector type 3.5 mm (female)
PLG20-12F	Signal generator, 25 MHz ...20 GHz, connector type 3.5 mm (female)
Supply set	
MCX-BNC cable assemblies	4 pcs., 0.8 m each
Torque wrenches	KT-2 for PLGxx-12F KT-4 for PLGxx-11F
Cable assembly USB 2.0 type-A — USB 2.0 Mini-B	Power and control cable assembly, 1.2 m, with screws on USB 2.0 Mini-B connector end
PLGxx-11F	PK2-18-11-11 PK2-18-11-13 PK2-18-11-13R
PLGxx-12F	PK2-18-11-13 PK2-18-11R-13 PK2-20-13-13

NOTE   On your request, the device may be supplied with additional coaxial adapters and cable assemblies.

Ordering example

— Noise generator PLG06-11F — 1 pcs.
— Cable assembly KSA18A-11-11-1000 — 1 pcs.