



DS INSTRUMENTS

SG6000PRO PURESINE RF GENERATOR



Description

The DS Instruments **SG6000PRO** RF Signal Generator continues to set the industry standard in affordable ultra-compact Signal Generation. The SG6000PRO provides a pure low-harmonic signal unlike most other compact signal generators. This fully synthesized, modern fractional-N synthesis device covers upwards of 7.0GHz and down to only 20MHz. Output power is calibrated and adjustable between **+15dBm** and -45dB in 0.25dB steps, or continuously via the internal variable

attenuator. The bright OLED display provides useful feedback for the user, and front control buttons provide a quick alternative to USB control. The PRO has phase noise approximately *20dB lower than the standard SG6000L*, a much smaller minimum frequency step size, a more accurate output level attenuator, and a wider frequency range.

Shipping Rev 6 with enhanced filtering as of JULY 2021!

Premium RF Signal Generator Features:

- Active harmonic filtering for a low-distortion output waveform
- Low phase noise for sensitive applications
- Stand-alone and USB remote operation
- Up to 7GHz+ output frequency (*Upgraded for 2021!*)
- Adjustable output power with both steps and variable tune
- Industry-standard SCPI command support
- Internal ultra-low phase-noise 100MHz reference
- Tiny frequency step size (2Hz)
- Front user control buttons for frequency and power levels
- Frequency-sweeping support (list & scan)
- Front-mounted bright OLED display
- Simple Windows control GUI
- Powered from standard USB-C
- Easy to interface with all software packages (.NET, Matlab, python, android, linux...)
- No extra drivers required for all common host systems
- Code examples provided for automated control
- Standard Ethernet (NEW!)

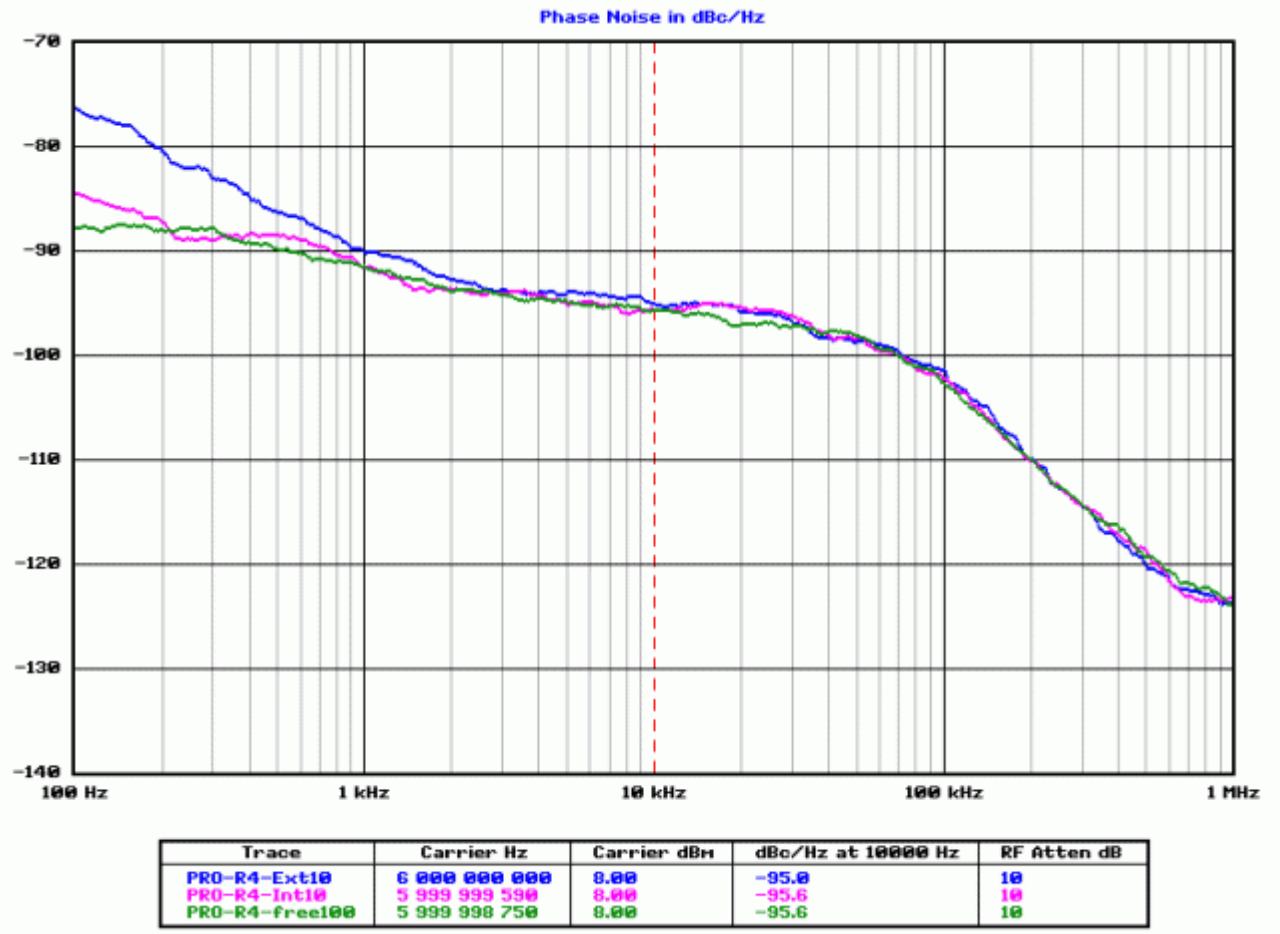
Device Technical Specifications:

- Highest Harmonic Levels: -32dBc typical
- Frequency Range: 20-**7000** MHz
- Device Power Level: **-45 to +15 dBm** (calibrated)
- Phase Noise at 6GHz: **-95dBc @ 10KHz** offset
- Frequency adjustment step size: **2Hz**
- Internal Attenuator (digital): 64dB (250 x 0.25dB Steps)
- Internal Attenuator (variable): ~15dB (10 bit DAC)
- Dimensions: 2.75" x 1.25" x 4.15"
- Input Voltage: 5V Standard USB-C
- Output Impedance: 50 Ohm
- RF Connector: Premium gold 18GHz microwave SMA

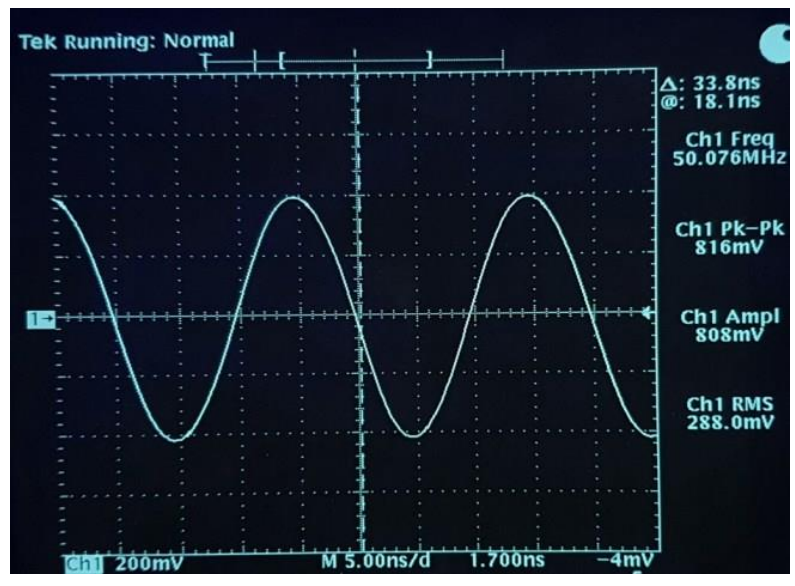
SG6000PRO REV6 Common Applications:

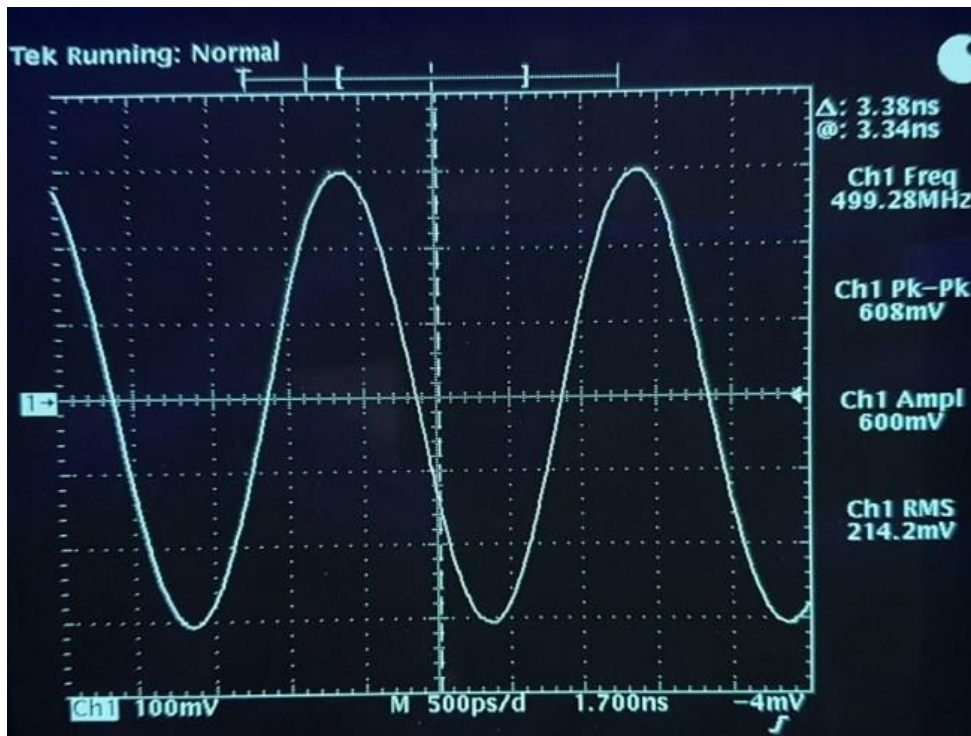
- Automated testing environments
- General RF Lab use
- Flexible LO sourcing
- Antenna design
- EMC Testing
- Production verification and testing
- Educational / university lab use
- Aerospace / Defense Research
- 802.11n Development / Testing
- LTE Engineering

Signal Generator Phase Noise Data:



Time Domain Plots:





PureSine SG6000PRO Enclosure:

