Products



RF POWER METERS



PMX40 RF Power Meter

The PMX40 provides design engineers and technicians the utility of traditional benchtop instrument, the flexibility and performance of modern USB RF power sensors, and the simplicity of a multi-touch display built with Boonton award-winning technology. The PMX40 supports the RTP5000, RTP4000, and CPS2000 families of power sensors.

Quick Features

- Capture/display/analyze peak and average power
- Frequency range from 4 kHz to 40 GHz
- Dynamic range from -60 dBm to +20 dBm
- Industry-leading video bandwidth (195 MHz) and risetime (3 ns)
- Industry-leading 100,000 measurements per second
- Industry-leading time resolution 100 ps
- Minimum pulse width/Max PRF 10 ns/50 MHz

- Real-Time Power Processing™
- Multi-channel measurements (up to 4 channels)
- 16 automated power and time measurements
- Statistical measurements (CCDF) and crest factor
- · Ultrafast trace acquisition and refresh rate
- Sensors can be used as standalone instruments

RF SIGNAL GENERATORS



SGX1000 RF Signal Generator

The SGX1000 RF signal generators offers high performance signal generation with an easy-to-use interface in a compact form factor. The SGX1000 utilizes a proprietary blend of direct digital and direct analog synthesis to provide ultra-fine frequency resolution, lightning-fast frequency switching, ultra-low phase noise and jitter, and superior reliability.

Quick Features

- Frequency range: 10 MHz to 18 GHz
- Output power range: -50 to +18 dBm
- 10/100 MHz reference input
- Multi-touch, touchscreen
- Lightning fast Switching speed: 200µs (typ)
- · Ultra-low phase noise (3 GHz, 10 kHz offset)
- -122 dBc/Hz (typ)

- Ultra-low jitter: 60 fs (typ)
- Excellent amplitude accuracy (as low as -40 dBm): +/-0.5 dB (typ)

RF NOISE GENERATOR



NGX1000 RF Noise Generators

The NGX1000 programmable noise generator is a high performance, broadband additive white gaussian noise (AWGN) generator in an easy-to-use compact form factor. The streamlined user interface and flat menu structure provides a fast, simple way to add RF noise in a communications system to test reliability, robustness and performance.

- · White Gaussian noise output
- Output power up to +10 dBm
- \bullet 127 dB of attenuation; 0.1 dB step size
- 5" touch screen display

- · Noise output through female N connector
- · Ethernet connection for remote control



RF POWER SENSORS



RTP Real-Time RF Power Sensors

The RTP4000 and RTP5000 USB power sensors provide accurate power measurement up to 40 GHz, over an 80 dB dynamic range. With Real-Time Power Processing™, they deliver an industry-leading 100,000 measurements with no gaps in the acquisition and zero measurement latency. Both families can be used as stand-alone USB power sensors connected to a computer running Boonton's Power Analyzer Suite which provides numerical and trace views of the pulsed, modulated, or CW signals being measured. Synchronized multi-channel measurements are supported. The RTP5000 Real-Time Peak Power Sensors, with a video bandwidth of 195 MHz, adds the ability to perform CCDF and crest factor statistical analysis on wideband communication system signals such as Wi-Fi 6E / Wi-Fi 7. The RTP5000 series rise time of ≤3ns permits the measurement of fast rise time and narrow (10 ns) radar signals.

Quick Features	RTP5000 Real-Time Peak USB Power Sensors	RTP4000 Real-Time True Average USB Power Sensors
Family Frequency Range	50 MHz to 40 GHz	4 kHz to 18 GHz
Dynamic Range	-60 dBm to +20 dBm	-60 dBm to +20 dBm
Peak Power	Yes	N/A
Average Power	Yes	Yes
Automated Statistical Measurements	CCDF, Crest Factor	N/A
Rise time/Video BW	Up to 3 ns/195 MHz	N/A
Signal Types	Pulse, modulated, CW	Pulse, modulated, CW
Continuous Sample Rate	100 MSa/s	25 MSa/s
Effective Sample Rate	10 GSa/s	1 GSa/s
Measurement Speed	100,000/s	100,000/s
Real-Time Power Processing™	Yes	Yes
Compatible Power Meter	PMX40	PMX40
Software for computer use	Boonton Power Analyzer	Boonton Power Analyze



CPS2008 True-Average Connected Power Sensors

CPS2000 True Average Connected Power Sensors provide USB, LAN and PoE capabilities to enable easy RF power measurement of modulated and CW signals from 50 MHZ to 8 GHz. Compatible with Windows and Linux systems, CPS2000 sensors include all the necessary drivers for programming through SCPI, IVI and LabVIEW. Connectivity and compatibility, combined with 60 dB dynamic range and 100 measurements per second, CPS2000 sensors are the ideal solution for lab, field, production test, ATE, remote monitoring and embedded environments.

- 50 MHz to 8 GHz frequency range
- -40 dBm to + 20 dBm dynamic range
- True average power measurements for CW and modulated signals
- · USB and LAN (with PoE) connectivity
- · SCPI, IVI and LabVIEW programming
- Windows and Linux compatibility
- >100 measurements per second
- Streamlined user interface for fast, accurate measurements



RF POWER METERS



4500C Peak Power Analyzer

The Model 4500C is the instrument of choice for capturing, displaying, analyzing, and characterizing microwave and RF power in both the time and statistical domains. It is ideal for design, verification, and troubleshooting of pulsed and noise-like signals used in commercial and military radar, electronic warfare (EW), wireless communications (e.g., LTE, LTE-A, and 5G), and consumer electronics (WLAN), as well as education and research applications.

Ouick Features

- Capture/display/analyze peak and average power
- Frequency range from 30 MHz to 40 GHz
- Dynamic range from -60 dBm to +20 dBm
- Video bandwidth of 125 MHz and risetime of
- Ultrafast trace acquisition and refresh rate
- Industry-leading time resolution 100 ps
- Minimum pulse width/Max PRF 6 ns/50 MHz

- Real-Time Power Processing™
- Multi-channel measurements (2 RF and 2 trigger)
- 15 automated power and time measurements
- Statistical measurements including PDF, CDF, and CCDF (optional)
- · Multi-level, multi-function calibrator
- Displays up to 4 measurements, 2 memory, and 1 math channel simultaneously



4240 RF Power Meter

The 4240 series of CW RF power meters provides the high speed measurement capability needed in a production environment, as well as the simplicity of operation required for bench top use. It provides very accurate measurements from -70 dBm to +44 dBm (sensor dependent) and has a rapid display update rate for tuning applications. The easy to read LCD displays both channels simultaneously with numeric and bar graph information.

- -70 dBm to +44 dBm
- 90 dB dynamic range
- ullet 10 kHz to 40 Ghz measurement range
- Single or dual-channel display
- Agilent HP 437 & Agilent HP 438, and Boonton 4220A & 4230A emulation
- >200 measurements per second
- Automatically loads sensor data
- Simple software control via SCPI language
- 50 MHz step calibrator
- IEEE-488 and RS-232 interfaces standard



RF POWER SENSORS



Wideband Peak Power Sensors

The overall performance of a power meter dependents on the power sensor employed. There are a variety of quality power sensors to meet virtually all applications. and also a complete line of Peak and Average power sensors up to 40 GHz for fast rise time, wide bandwidth and wide dynamic range applications.

Quick Features

- Wide dynamic range (-70 dBm to +20 dBm)
- Calibration factors, linearity and temperature compensations data stored in EEPROM
- Excellent SWR for reducing mismatch uncertainty
- Fast measurement speed
- Accurate calibration and unique traceability to NIST



Average RF Power Sensors

For all CW and continuously modulated signals, there are CW and average power sensors up to 40 GHz. The sensors have wide dynamic range and high power measurement capabilities.

- Wide dynamic range (-70 dBm to +20 dBm)
- Calibration factors, linearity and temperature compensations data stored in EEPROM
- Excellent SWR for reducing mismatch uncertainty
- Fast measurement speed
- Accurate calibration and unique traceability to NIST



RF VOLTMETER



9240 RF Voltmeter

The 9240 series is the latest addition to Boonton's popular 9200 series of RF voltmeters. It combines accuracy, smart probes, and operator features that have never before been available in its price range. It is simple to use on the bench, and comprehensive enough to integrate into an ATE system. The voltage probes directly measure from 200 μ V to 10 V with usable indication as low as 50 μ V and have true RMS response below 30 mV.

Quick Features

- 10 Hz to 1.2 GHz measurement range
- · Dual-channel and differential voltage measurements
- 200 μV to 300 V measurement range
- · 1% accuracy at full scale
- DC recorder output
- · IEEE-488 and RS-232 interfaces standard

AUDIO ANALYZER



1121A Audio Analyzer

The 1121A audio analyzer provides fast, accurate measurements including frequency, AC or DC level, distortion, SINAD and signal-to-noise ratio. It also includes an audio source providing accurate low distortion signals over wide frequencies and level ranges.

- Frequency range from 10 Hz to 200 kHz
- · Low-distortion audio source for testing systems, amplifiers, receivers and components
- Measures AC/DC level, distortion, SINAD, S/N, Non-volatile memory for instant recall of frequency
- 10 readings/s
- 50-, 150- and 600-ohm output impedances
- 300 B5V full-scale range sensitivity
- 70 dB Common Mode Rejection Ratio
- Sweeps frequency or level
- up to 99 complete front-panel setups
- · IEEE-488 interface





MODULATION ANALYZER



8201A Modulation Analyzer

The 8201A provides precision modulation and audio analysis in a single, easy-to-operate package. Measures AM, FM, PM, carrier and audio frequencies, SINAD, distortion and carrier level.

Quick Features

- Carrier frequency range: 100 kHz to 2.5 GHz
- 0 to 500 kHz FM deviation to 1% accuracy
- 0 to 99% AM to 1% accuracy
- 0 to 500 radians to 3% accuracy
- Audio distortion range 0.01% to 100% THD or 0 to 80 dB SINAD
- · IEEE-488 interface

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N/LC/0623/EN

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