55 Series Wideband USB Power Sensor
Fast and Accurate RF Power Measurements

Boonton once again sets the standard for fast RF power measurements with the introduction of its 55 Series Wideband USB power sensors. Built with Boonton's **Real-Time Power Processing™** technology (patent pending), this new product line offers speed and accuracy never before seen in a USB form factor. The 55 Series sensors are ideal for manufacturing, design, research, and service in commercial and military applications such as telecommunications, avionics, RADAR, and medical systems. They are the instrument of choice for fast, accurate and highly reliable RF power measurements, equally suitable for product development, compliance testing, and site monitoring applications.

Features

- Ultra-fast rise time: 3ns*
- Time resolution: 100 ps
- Continuous Sample rate: 100 Msamples / sec
- Effective Sample Rate: 10 Gsamples / sec
- Class leading Video Bandwidth: 195 MHz*
- Statistical Measurements 100 Mpoints / sec
- Trace acquisition speed: 100 k sweeps / sec
- **Real Time Power Processing™:** No latency due to buffer processing by host PC
- Internal RF or External TTL trigger, Master/Slave in/out connector
- Synchronized multi-channel measurements
- Removable, locking USB cable

* 55006 - Video bandwidth tested by measuring peak-to-average on a two-tone separation signal at +10dbm, frequency set at 1 GHz. Test limit set at 2dB roll off from the nominal 3dB peak-to-average flatness graph.

Applications

- Crest Factor and Peak to Average Power Ratio (PAPR) measurements for Power Amplifiers and RF components
- Telecommunication & Satellite signals: W-CDMA, QAM, OFDM, LTE-FDD and LTE-TDD
- WiFi signals: 802.11ac and legacy 802.11 a/g/n/b
- RF and Microwave pulse modulated power measurements: RADAR, MRI, Particle Accelerators
- General purpose scalar measurements such as gain and return loss using modulated and pulsed signals as well as CW
- Monitoring, Recording, ALC loops, transient phenomena
- Ideal RF Power measurement tool for:
  - Research & Development
  - Manufacturing,
  - Quality Assurance
  - Field applications including installation, maintenance, service and monitoring

Taking performance to a new peak

Specifications	55006	55318	55340	55518	55540
RF Frequency Range	50 MHz to 6 GHz	50 MHz to 18 GHz	50 MHz to 40 GHz	50 MHz to 18 GHz	50 MHz to 40 GHz
Average Dynamic Range	-60 to +20 dBm	-34 to +20 dBm	-34 to +20 dBm	-50 to +20 dBm	-50 to +20 dBm
Pulse Dynamic Range	-50 to +20 dBm	-24 to +20 dBm	-24 to +20 dBm	-40 to +20 dBm	-40 to +20 dBm
Internal Trigger Range	-38 to +20 dBm	-10 to +20 dBm	-10 to +20 dBm	-27 to +20 dBm	-27 to +20 dBm
Rise time (fast/slow)	3 ns/<10 µs	5 ns/<10 µs	5 ns/<10 µs	<100 ns/<10 µs	<100 ns/<10 µs
Video Bandwidth	195 MHz/350 kHz	70 MHz/350 kHz	70 MHz/350 kHz	6 MHz/350 kHz	6 MHz/350 kHz
Single-shot Bandwidth	35 MHz	35 MHz	35 MHz	6 MHz	6 MHz
RF Input	Type N, 50 ohm	Type N, 50 ohm	2.92 mm, 50 ohm	Type N, 50 ohm	2.92 mm, 50 ohm
VSWR	1.25 (0.05 to 6 GHz)	1.15 (0.05 to 2.0 GHz) 1.28 (2.0 to 16 GHz) 1.34 (16 to 18 GHz)	1.25 (0.05 to 4.0 GHz) 1.65 (4 to 38 GHz) 2.00 (38 to 40 GHz)	1.15 (0.5 to 2.0 GHz) 1.20 (2.0 to 6.0 GHz) 1.28 (6.0 to 16 GHz) 1.34 (16 to 18 GHz)	1.15 (0.05 to 2.0 GHz) 1.65 (4.0 to 38 GHz) 2.00 (38 to 40 GHz)

Series Specifications

Sampling Techniques	Real-time/Equivalent Time/Statistical Sampling
Continuous sample rate	100 MHz
Effective sample rate	10 GHz
Time Resolution	100 ps
Statistical Analysis	Continuous or gated CCDF
Statistical Speed	100M points/sec
Trigger Sources	Internal or External TTL
External Trigger in/out	TTL in (slave) or out (master)
Minimum Trigger Width	10 ns
Maximum Trigger Frequency	50 MHz
Trigger Jitter	0.1 ns rms
Trace Acquisition Speed	100K sweeps/second
Measurement Speed over USB	100K meas/sec (buffered mode) 800 meas/sec (continuous)
Trigger Modes	Auto, Normal, Single, Free run
Trigger Arming	Continuous, Trigger Holdoff, Frame (gap) Holdoff
Remote Connectivity	USB 2.0, type B connector
Command Protocol	IVI-C and IVI-Com
Maximum Input Power	200mW avg, 1W for 1us peak
Size (LxWxH)	145 x 43 x 43 (mm) 5.7 x 1.7 x 1.7 (inches)
Weight	363 grams/0.8 lbs.
Cable (with locking USB)	1.8 m / 6 ft
Power Consumption	2.5W max (USB high power device)
Operating Temperature	0 to 55ºC
Storage Temperature	-40 to 70ºC

B/Ser55USB/0415/EN
Note: Specifications, terms and conditions
are subject to change without prior notice.

Wireless Telecom Group

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