Data Sheet

BOONTON
A WIRELESS TELECOM GROUP COMPANY

52000 Series USB Power Sensor/Meter

Taking performance to a new peak

52000 Series USB Power Sensor/Meter

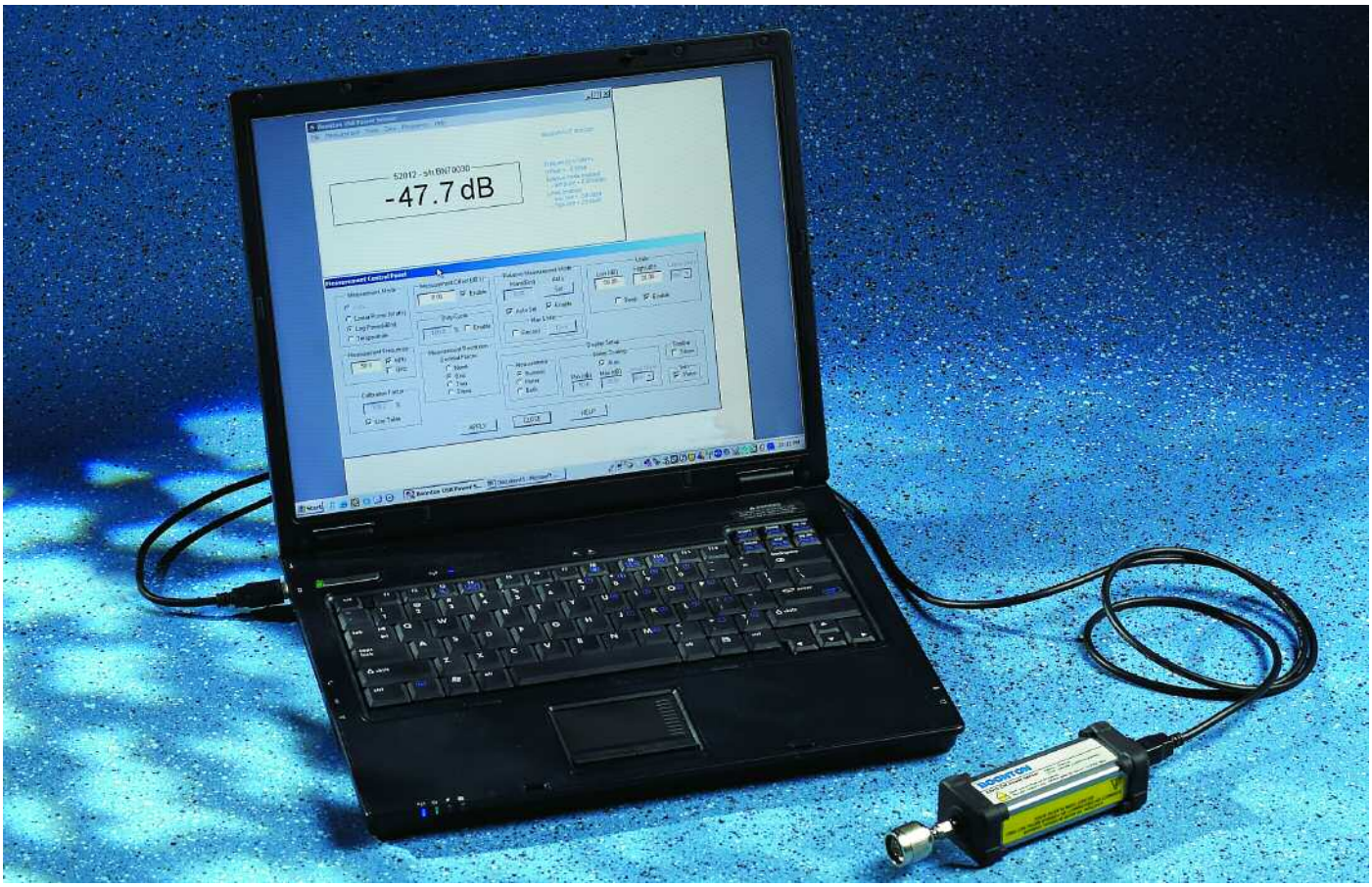
The 52000 series power sensor/meter are complete RF power measurement instruments. The sensor contains a CPU that operates the interface and processes the measurement results. All measurement data and settings can be transmitted via a USB interface to and from a PC. This implementation allows the PC to be the user interface in classic microwave and RF power measurement.

The 52000 series allows for cost effective, high precision power measurements and is ideal for production and service environments. Multiple sensors can be connected to a single PC saving rack space and reducing cost when compared to conventional RF and microwave power meters. This instrument is lightweight and portable measuring only 1.3 x 1.7 x 4.9 inches (34 x 43 x 125 mm) and can be easily operated from a laptop computer.

The 52000 series sensor/power meter is controlled using software loaded on a PC that includes a powerful but easy to use soft front panel interface. This software and software toolkit is supplied with every 52000 series power sensor/meter. It includes a DLL (dynamic link library) that runs the user interface on a Windows XP operating system.

Features

- Lightweight and easy to use
- Convenient for production test and field service
- Replacement solution for conventional power meter and sensor combination
- Simple USB connection to laptop or PC
- Use multiple sensors on one laptop or PC
- Robust construction with good reliability
- No reference calibrator required
- Measurement range from –50 dBm to +20 dBm
- Frequency ranges available to 12.4 or 18.5 GHz



	52012	52018
Frequency	10MHz to 12.4GHz	10MHz to 18.5GHz
Measurement range	-50 to +20dBm CW	-50 to +20dBm CW
Linearity error 25 ± 5 deg C	±0.27 dB; -40dBm to +10dBm; greater than or equal to 50MHz ±0.49 dB; +10dBm to +20dBm; greater than or equal to 50MHz ±0.28 dB; -40dBm to +10dBm; less than 50 MHz ±0.95 dB; +10dBm to +20dBm; less than 50 MHz	±0.27 dB; -40dBm to +10dBm; greater than or equal to 50MHz ±0.49 dB; +10dBm to +20dBm; greater than or equal to 50MHz ±0.28 dB; -40dBm to +10dBm; less than 50MHz ±0.95 dB; +10dBm to +20dBm; less than 50-MHz
Cal factor error 25 ± 5 deg C	±0.24 dB; 10 MHz to 50 MHz ±0.19 dB; 50MHz to 4.5GHz ±0.23 dB; 4.5GHz to 8.5GHz ±0.32 dB; 8.5GHz to 12.4GHz	±0.24 dB; 10MHz to 50MHz ±0.19 dB; 50MHz to 4.5GHz ±0.23 dB; 4.5GHz to 8.5GHz ±0.32 dB; 8.5GHz to 12.4GHz ±0.38 dB; 12.4GHz to 18.5GHz
Linearity variation 25 ± 25 deg C	±0.29 dB; 50MHz to 12.4GHz ±0.47 dB; 10MHz to 50MHz	±0.35 dB; 50MHz to 18.5GHz ±0.47 dB; 10MHz to 50MHz
Cal factor variation 25 ± 25 deg C	±0.29 dB; greater than or equal to 50MHz ±0.44 dB; less than 50MHz	±0.32 dB; greater than or equal to 50MHz ±0.44 dB; less than 50MHz
Zero set	±1.2 nW	±1.8 nW
Noise	0.12 nW RMS	0.15 nW RMS
Input SWR - max	1.26:1 = 12.4 GHz	1.26:1 = 18.5 GHz
Connector type	SMA (m)	SMA (m)

	52026
Frequency	10MHz to 26.5GHz
Measurement range	-50 to +20dBm CW
Linearity error 25 +/- 5 deg C	±0.27 dB; -35dBm to +20dBm; 10 MHz to 26.5 GHz
Cal factor error 25 +/- 5 deg C	±0.16 dB; 10 MHz to 6 GHz ±0.19 dB; 6 GHz to 18.5 GHz ±0.21 dB; 18.5GHz to 26.5 GHz
Linearity variation 25 +/- 25 deg C	±0.2 dB; 10 MHz to 6 GHz; -35dBm to +20dBm ±0.25 dB; 6 GHz to 18.5 GHz; -35dBm to +20 dBm ±0.46 dB; 18.5 GHz to 26.5 GHz; -35 dBm to +20 dBm
Cal factor variation 25 +/- 25 deg C	±0.2 dB; 10 MHz to 6 GHz ±0.3 dB; 6 GHz to 18.5 GHz ±0.35 dB; 18.5 GHz to 26.5 GHz
Zero set	±1.6 nW
Noise	0.14nW standard deviation
Input SWR - max	1.25:1 10 MHz to 18 GHz 1.35:1 18 GHz to 26.5GHz
Connector type	K type* (m)

Universal Specifications (52012, 52018, & 52026)

Operating Temperature	0 to 50 deg C
Shock	25G, 11 ms
Vibration	15G, 100 to 2000Hz
Measurement Speed: -50 to -35 dBm	8 measurements per sec.
-35 to -20 dBm	33 measurements per sec.
-20 to +20 dBm	50 measurements per sec.
Max input power (damage level)	200mW CW (+23dBm)
Connectivity	USB 2.0 (cable length up to 5m)
USB power supply current	Approx. 50mA
Sensor Cable Length (std)	76" (193 cm)
Dimensions (max) H x W x L	1.34" x 1.69" x 4.92" (34 x 43 x 125 (mm))
Weight	0.18lb (83 grams)

Specifications include expanded uncertainty of measurement stated as the standard uncertainty of measurement multiplied by the coverage factor k=2 which corresponds to a coverage probability of approximately 95% for abnormal distribution.

Ordering information

52012	10MHz to 12.4GHz (Includes 6' USB sensor cable)
52018	10MHz to 18.5GHz (Includes 6' USB sensor cable)

Accessories Provided

Getting Started Guide with Operating Manual
User Software on CD and Programming Manual

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Note: Specifications, terms and conditions are subject to change without prior notice.

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