

# Power Measuring Equipment

## Three-Channel Power Meter Features High-Speed Measurement Capability

Advanced digital signal processing combined with a full line of fast-response diode heads allows the PM2003 to deliver 200 readings per second with one channel, or 100 per second when two channels are used. Two channels at a time can be simultaneously displayed and recorded, the third channel can be easily switched in to be displayed or recorded. The PM2003 measures signals from -70 dBm to +44 dBm (with appropriate powerhead) and can store calibration data for up to four heads in its internal non-volatile memory. Its dynamic range extends to 90dB when diode heads are used.

We offer a family of diode or thermo-couple 50 ohm powerheads with excellent specifications. All are supplied with NIST traceable calibration factors. Each new powerhead is supplied with a Powerhead Data Adapter that has complete calibration data stored right in a built-in EEPROM and a 5' powerhead cable. Please visit our web site for a full listing of available powerheads.

## PSP Series Pulse Power Sensors

The PSP Series Wideband USB pulse power sensors turn your PC or laptop with a standard USB 2.0 port into a pulse power analyzer, without the need for any other instrument.



Power measurements from the PSP Series can be displayed on the PC or can be integrated into a test system with a set of remote commands. A Status LED on the sensor provides indication of the operational state for diagnostic purposes.

The PSP Series power sensors include 6, 18 and 40 GHz models for measurement of wideband modulated and unmodulated signals over a frequency range of 50 MHz up to 40 GHz.

The PSP Series Wideband USB pulse power sensors are supported by both AR's emcware® software and PulsewARe. PulsewARe is a Windows-based software package that provides control and readout of the sensors.

The PSP Series are ideal for radiated immunity, telecommunications and intentional radiator EMC testing, as well as applications in manufacturing, design and research. The design of these products allows for fast, accurate and reliable RF power measurements of a wide range of pulsed, modulated and CW signals.

### PM2003 Three-Channel Power Meter.

<b>Frequency Range</b>	10 kHz to 40 GHz, powerhead dependent
<b>Power Range</b>	-70 dBm to +44 dBm, powerhead dependent
<b>Measurement Speed:</b>	1 channel: 200 Readings/Sec. 2 channels: 100 Readings/Sec.
<b>Dynamic Range</b>	Up to 90 dB with diode heads, 50 dB with thermocouple heads.
<b>Inputs</b>	Rear panel HEAD connectors and rear panel IEEE488 connector standard.
<b>Outputs</b>	Rear panel PWR/REF connector, 0 dBm, 50 MHz. Rear panel RECORDER BNC connector, 0 to 10V into 1 MΩ. Output impedance is 9.09 kΩ. May be operated into 1 kΩ or 1V fs.

Standard Power Heads (Sensors)	Frequency	Dynamic range (model PM2003)
PH2000A Dual diode.	10 kHz to 8 GHz,	-60 to +20 dBm.
PH2004A Dual diode.	100 kHz to 18 GHz,	-60 to +20 dBm.
PH2010 Dual diode.	30 MHz to 40 GHz,	-70 to +20 dBm.

### PSP001-PSP005 Pulse Power Sensors.

<b>Sampling Techniques:</b>	Real-time/Equivalent Time/Statistical Sampling
<b>Continuous Sample Rate:</b>	100 MHz
<b>Effective Sample Rate:</b>	10 GHz
<b>Time Resolution:</b>	100 ps
<b>Statistical Analysis:</b>	Continuous or gated CCDF
<b>Statistical Speed:</b>	100M points/sec
<b>Trigger Sources:</b>	Internal or External TTL
<b>External Trigger in/out:</b>	TTL in (slave) or out (master), SMB connector
<b>Minimum Trigger Width:</b>	10 ns
<b>Maximum Trigger Frequency:</b>	50 MHz
<b>Trigger Jitter:</b>	0.1 ns rms
<b>Trace Acquisition Speed:</b>	100K sweeps/second
<b>Measurement Speed:</b>	100K meas/sec (buffered mode) over USB 800 meas/sec (continuous)
<b>Trigger Modes:</b>	Auto, Normal, Single, Free run
<b>Trigger Arming:</b>	Continuous, Trigger Holdoff, Frame (gap) Holdoff
<b>Remote Connectivity:</b>	USB 2.0, type B connector
<b>Command Protocol:</b>	IVIC and IVICom
<b>Maximum Input Power:</b>	200mW avg, 1W for 1us peak
<b>Size (LxWxH):</b>	145 x 43 x 43 mm (5.7 x 1.7 x 1.7 in)
<b>Weight:</b>	363 grams/0.8 lbs.
<b>Power Consumption:</b>	2.5W max (USB high power device)

Sensor Model	Frequency Range	Dynamic range
PSP001	50 MHz to 6 GHz	-60 to +20 dBm
PSP002	50 MHz to 18 GHz	-34 to +20 dBm
PSP003	50 MHz to 40 GHz	-34 to +20 dBm
PSP004	50 MHz to 18 GHz	-50 to +20 dBm
PSP005	50 MHz to 40 GHz	-50 to +20 dBm