

**Model PM2003  
Power Meter  
10kHz–40GHz**

The Model PM2003 is a three channel high performance power meter that features high speed measurement capability and wide dynamic range.

Photo shows PM2003 with power heads attached.



**SPECIFICATIONS**

FREQUENCY RANGE .....	10 kHz - 40 GHz, power head dependent
POWER MEASUREMENT RANGE.....	-70 dBm to +44 dBm, power head dependent
NUMBER OF CHANNELS .....	3 (2 simultaneously viewable)
MEASUREMENT SPEED.....	1 channel: 200 readings/sec. 2 channels: 100 readings/sec.
POWER HEADS.....	Select from a large number of diode and thermocouple Power Heads. The linearity and frequency calibration factors for the heads are provided in an EEPROM contained in a Head Data Adapter shipped with the Power Head.
DYNAMIC RANGE .....	Up to 90 dB with diode heads, 50 dB with thermocouple heads. See Power Head Specifications.
INPUTS.....	Rear panel HEAD connectors and rear panel IEEE-488 connector standard.
OUTPUTS .....	Rear panel PWR/REF connector, 0 dBm, 50 MHz. Rear panel RECORDER BNC connector, 0 to 10 V into 1 MΩ. Output impedance is 9.09 kΩ. May be operated into 1 kΩ or 1 V fs.
EMULATION.....	HP437, HP438 and Boonton 4230, SCPI
DISPLAYS.....	Menu-driven 20 character x 4 line LCD display. Simultaneous display of dual channels with bar graph proportional to data display.
DISPLAY UNITS.....	Absolute, watts and dBm. Relative, dBr
DISPLAY RESOLUTION.....	5 digits, nW, μW, mW and W; 4 digits dBm
MEASUREMENT ACCURACY .....	Total accuracy is the sum of the following uncertainties: (errors are ± worst case).
INSTRUMENTATION ACCURACY .....	0.23% of full scale. 0.46% of 1/10 full scale

## SPECIFICATIONS, MODEL PM2003

### POWER REFERENCE UNCERTAINTY

Output Frequency .....	50.025 MHz $\pm$ 0.005%.
Output Level .....	-60 to +20 dBm
Resolution .....	0.1 dB steps
Accuracy, 0°-20°C, NIST Traceable .....	At 0 dBm $\pm$ 0.055 dB (1.27%) +20 to -39 dBm $\pm$ 0.075 dB (1.74%) -40 to -60 dBm $\pm$ 0.105 dB (2.45%)
Source Impedance .....	50 $\pm$ 1 Ohm. SWR: <1.05
Harmonic Output .....	<-50dBc.

OTHER UNCERTAINTIES ..... For Head, Noise, High Frequency Calibration Uncertainty See Power Head Specifications

CALIBRATION FACTORS ..... +3 dB to -3 dB in 0.01 dB steps. These calibration factors are stored in non-volatile memory. When a frequency other than that stored is used, the meter linearity interpolates between the calibration factor above and below the frequency entered to obtain a calibration factor.

RANGING ..... Automatic or Manual

FILTERING ..... Filter times in 0.05 second intervals to 20 seconds.

ZEROING ..... Automatic function to calculate, store and apply zero corrections to each range

DISPLAY OFFSET..... -99.99 to 99.99 in 0.01 dB steps (dBr)

POWER CONSUMPTION ..... 90 - 260 VAC ( $\pm$ 10%), 47 - 63 Hz, 24 VA maximum

OPERATING TEMPERATURE..... 0° to +55°C

WEIGHT ..... 4.9 lb (2.2 kg)

DIMENSIONS ..... 8.25 in (21.0 cm) wide, 3.5 in (8.9 cm) high, 13.5 in (34.3 cm) deep

INTERFACES ..... IEEE-488 and RS-232

ACCESSORIES REQUIRED ..... One or more of the available power heads and a 5 ft. power head cable (supplied with each head ordered) are both required. See PH2000 Specification Sheet.

ACCESSORIES AVAILABLE ..... RM2000 19" Rack Mount Kit

EXPORT CLASSIFICATION ..... EAR99