



HP 437B



HP 70100A

### HP 437B Power Meter

The HP 437B is a low-cost, high performance, single-channel, programmable, average Power Meter compatible with the HP 8480 family of thermocouple and diode power sensors. Depending on which Power Sensor is used, the HP 437B can measure from  $-70$  dBm (100pW) to  $+44$  dBm (25W) at frequencies ranging from 100 KHz to 50 GHz.

Designed for ATE systems and demanding benchtop measurements, the HP 437B Power Meter makes fast, accurate and reliable average power measurements. Only 3 1/2 inches high and half rack wide, the HP 437B minimizes the use of critical rack space in ATE systems. The advanced plastics technology used in the HP 437B cabinet combines the light weight of plastic with the shielding effectiveness of metal, making the HP 437B the only power meter to meet MIL-STD-461C EMI specifications.

A modern and flexible feature set makes this meter easy to use in any application:

- Automatic calibration and zeroing.
- Frequency entry instead of Cal Factor.
- Ten pre-loaded sensor Cal Factor versus frequency tables.
- Selectable resolution to 0.001 dB.
- Offset entry in dB.
- Duty cycle entry for a convenient peak power representation of the measured average power.
- Ten store/recall registers.
- HP-IB is standard.
- Optional analog meter (H36).

With a measurement speed twice as fast as that of the industry-standard HP 436A, powerful programming capability, state-of-the-art accuracy and exceptional reliability, the HP 437B lets you measure your test signal with speed, precision and confidence.

### HP 437B Specifications

**Frequency Range:** 100 kHz to 50 GHz, sensor dependent.

**Power Range:**  $-70$  to  $+44$  dBm (100pW to 25 W), sensor dependent.

**Power Sensors:** Compatible with all HP 8480 series Power Sensors.

**Dynamic Range:** 50 dB in 10 dB steps.

**Display Units:** Absolute: Watts, dBm.

Relative: percent, dB.

**Resolution:** Selectable resolution of 0.1, 0.01 and 0.001 dB in logarithmic mode; or 1%, 0.1% and 0.01% of full scale in linear mode.

### Accuracy

**Instrumentation:**  $\pm 0.02$  dB or  $\pm 0.5\%$ .

**In REL mode:**  $\pm 0.02$  dB or  $\pm 0.5\%$  within measurement range;  $\pm 0.04$  dB or 1% outside measurement range.

**Zero Set:**  $\pm 0.5\%$  of full scale on most sensitive range.

**EMI:** Radiated and Conducted Emissions and Radiated and Conducted Susceptibility are within the requirements of RE02, CE03, RS01/03 and CS01/03 called out in MIL-STD-461C, and within the requirements of VDE 0871 and CISPR Publication 11.

### Power Reference

**Power Output:** 1.00mW, Factory set to  $\pm 0.7\%$  traceable to US National Bureau of Standards.

**Accuracy:**  $\pm 1.2\%$  worst case ( $\pm 0.9\%$  RSS) for one year.

### General

**Rear Panel Output:** Analog 0-1 volt without digital filtering or Cal Factor correction, 1 kohm output impedance, BNC connector.

**Line Voltage:** 100 and 120 Vac,  $+5\%$ - $10\%$ , 48-66 Hz, 360-440 Hz; 220 and 240 Vac,  $+5\%$ - $10\%$ , 48-66 Hz.

**Power Requirement:** 8 Watts maximum (10 VA max).

**Weight:** Net 2.6 kg (5.9 lbs); shipping 4.5 kg (10 lbs).

**HP-IB Codes:** SH1, AH1, T5, TEO, L4, LEO, SR1, RL1, PP1, DC1, DT1, CO.

**Dimensions:** 88m H x 212mm W x 273mm D (3.46" H x 8.35" W x 10.75" D).

### Accessories

**Furnished:** HP 11730A, 1.5m (5 ft.) cable for power sensors; 2.4m (7.5 ft.) power cable. Main plug shipped to match destination requirements.

**Available:** To select or substitute non-standard lengths for power sensor cable, see page 210. To rack mount one HP 437B order part number 5060-0174.

### HP 70100A Power Meter Module (Modular Measurement System)

The HP 70100A is a full-feature single channel power meter module for the Modular Measurement System (see page 115). It has all the capability of the HP 437B Power Meter in an 1/8th rack-width module. The HP 70100A features the same modern and flexible feature set as the HP 437B, the same state-of-the-art accuracy and is also fully compatible with the HP 8480 series of power sensors.

### Ordering Information

	Price
HP 437B Power Meter	\$2500
Option 002: Supplies a parallel rear panel sensor input	+\$75
Option 003: Supplies a parallel rear panel sensor input and moves reference oscillator to rear panel	+\$75
Option 004: Delete the HP 11730A sensor cable	-\$75
Option 401: Provides side-carrying handle and standoff feet	+\$25
Option 915: Service Manual	+\$25
Option 916: Extra Operating Manual	+\$25
Option W30: Two additional years of return-to-HP warranty	+\$65
Option H36: Additional analog meter	+\$100
HP 70100A Power Meter Module	\$2900
Option 003: Moves reference oscillator from front to rear panel	\$0
Option 004: Delete the HP 11730A Power Sensor Cable	-\$75
Option 005: Delete reference oscillator	-\$250
Option W30: Two additional years of return-to-HP warranty	+\$70

Fast-ship product - see page 734