

- Fast measurement speed (up to 200 readings per second with the 441A, and 100 readings per second with the 442A, over the HP-IB, with ECP-series sensors)
- Speed improvement of x2 using the HP 8480-series power sensor (compared to HP 437B)
- Code-compatible with the HP 437B (EPM-441A)
- Operates with the new ECP-series plus all HP 8480 series power sensors
- No range-switching delays with HP 8480-series sensors (over a 50 dB range), and only one fast-range switch point with ECP-series sensors (over a 90 dB range)
- High-resolution LCD display with backlighting for a wide viewing angle of data
- Same height and width as the HP 437B (EPM-441A), HP 438A (EPM-442A)
- Conformity to CE and CSA standards

HP EPM-441A Single-Channel Power Meter

NEW

The HP EPM-441A is a low-cost, high-performance, single-channel, programmable power meter. It is fully compatible with the HP 8480 series of power sensors and the ECP series of power sensors. Depending upon which sensor is used, the HP EPM 441A can measure from -70 dBm to $+44$ dBm at frequencies from 100 kHz to 110 GHz. Designed for bench and automatic test equipment (ATE) use, the EPM-441A makes fast (up to 200 readings per second with ECP series sensors), accurate and repeatable power measurements.

The EPM-441A power meter has a high-resolution LCD display with LED backlighting and contrast control. This allows users to see the power readings from a distance, at a wide viewing angle and in a variety of lighting conditions. The user interface is easy to learn and use, with hardkeys for the most frequently used functions, and softkey menus to simplify instrument configuration for different applications. Ten instrument configurations can be saved and recalled, reducing the need to repeat setup sequences.

Because the EPM-441A power meter is designed to be code-compatible with the previous-generation HP 437B power meter, a user's investment in automatic-test procedures, software generation and verification is protected.

Front and rear panel bumpers protect the EPM-441A from everyday knocks. The meter weighs only 4 kg (9 lbs), and a bail handle makes it easy to carry.

HP EPM-442A Dual-Channel Power Meter

NEW

The HP EPM-442A is a low-cost, high-performance, dual-channel, programmable power meter. It is fully compatible with the HP 8480 series of power sensors and the new ECP series of power sensors. Depending upon which sensor is used, the HP EPM-442A can measure from -70 dBm to $+44$ dBm at frequencies from 100 kHz to 110 GHz.

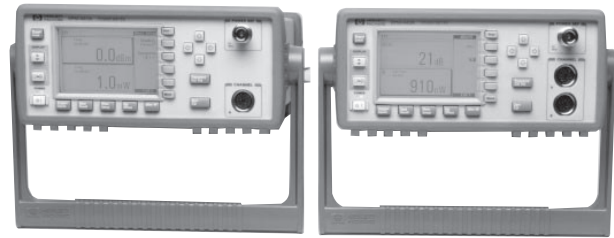
Designed for bench and automatic test equipment use (ATE), the EPM-442A makes fast (up to 100 readings per second with ECP series sensors), accurate and repeatable power measurements. The HP EPM-442A is a true dual-channel power meter, which means that you get two simultaneous power readings on the display.

The EPM-442A power meter has a high-resolution LCD display with LED backlighting and contrast control. This allows users to see the power readings from a distance, at a wide viewing angle and in a variety of lighting conditions. Users can display both the digital and analog types of readout on the meter's split screen facility. The analog peaking meter allows users to make accurate adjustments.

The user interface is easy to learn and use, with hardkeys for the most frequently used functions, and softkey menus to simplify instrument configuration for different applications. Difference (A-B, B-A) and ratio (A/B, B/A) functions are provided, and ten instrument configurations can be saved and recalled, reducing the need to repeat setup sequences.

Because the EPM-442A power meter is the same height (88.5 mm / 3.5 in) and width (212.6 mm / 8.5 in) as the HP 438A, this makes them easy to substitute into rackmount automatic-test-equipment systems.

Instrumentation absolute accuracy for both the EPM-441A/442A is specified at ± 0.02 dB in logarithmic mode and $\pm 0.5\%$ in linear mode, which makes the EPM family of power meters a negligible part of the overall measurement uncertainty.



HP EPM-441A and HP EPM-442A

HP EPM-441A
HP EPM-442A

Specifications

Frequency Range: 100 kHz to 50 GHz and 75 GHz to 110 GHz, sensor dependent

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

Power Sensors: Compatible with all HP 8480 series and HP ECP series sensors

Single Sensor Dynamic Range:

90 dB maximum (HP ECP series sensors)

50 dB maximum (HP 8480 series sensors)

Display Units:

Absolute: Watts or dBm

Relative: Percent or dB

Display Resolution: Selectable resolution of 1.0, 0.1, 0.01, and 0.001 dB in log mode, or 1 to 4 digits in linear mode

Default Resolution: 0.01 dB in log mode, 3 digits in linear mode

Accuracy

Instrumentation

Absolute: ± 0.02 dB (log) or $\pm 0.5\%$ (linear). Add the corresponding power sensor linearity percentage

Relative: ± 0.04 dB (log) or $\pm 1.0\%$ (linear). Add the corresponding power sensor linearity percentage

Power Reference

Power Output: 1.00 mW (0.0 dBm). Factory set to $\pm 0.7\%$, traceable to the U.S. National Institute of Standards and Technology (NIST)

Accuracy: $\pm 1.2\%$ worst case ($\pm 0.9\%$ rss) for one year

Key Literature

EPM Power Meters and E-Series Power Sensors
Technical Specifications, p/n 5965-6382E

EPM Power Meters and E-Series Power Sensors
Brochure, p/n 5965-6380E

RF and Microwave Power Products Selection Guide,
p/n 5965-6629E

EPM Power Meters and E-Series Power Sensors
Configuration Guide, p/n 5965-6381E

Fundamentals of RF and Microwave Power Measurements
Application Note 64-1A, p/n 5965-6630E

Ordering Information

HP EPM-441A E4418A Power Meter

HP EPM-442A E4419A Power Meter

Opt 002 Supplies rear-panel sensor input
(power reference calibrator is on front panel)

Opt 003 Supplies rear-panel sensor input
(power reference calibrator is on rear panel)

Opt 004 Deletes the HP 11730A sensor cable

Opt 908 Supplies a one-instrument rackmount kit

Opt 909 Supplies a two-instrument rackmount kit

Opt 1BN Supplies ANSI/NCSL Z540-1-1994

Certificate of Calibration
(supersedes MIL-STD-45662B)

Opt 1BP Supplies ANSI/NCSL Z540-1-1994

Certificate of Calibration with data
(supersedes MIL-STD-45662B)

Opt UK6 Supplies commercial calibration
certificate with test data