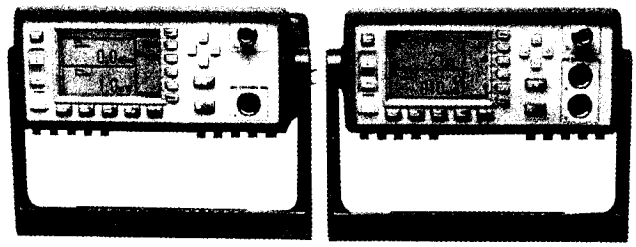
HP E4418A
HP E4419A

- Fast measurement speed (up to 200 readings per second with the E4418A, and 100 readings per second with the E4419A, over the HP-IB, with E-series sensors)
- Speed improvement of x2 using the HP 8480-series power sensor (compared to HP 437B)
- Code-compatible with the HP 437B (E4418A) and HP438B (E4419A)
- Operates with the new E-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 E-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 and the HP438A
- Conformity to CE and CSA standards



HP EPM Series Power Meters

HP E4418A Single-Channel Power Meter

The HP E4418A 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 E-series of power sensors. Depending upon which sensor is used, the HP E4418A 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 E4418A makes fast (up to 200 readings per second with E-series sensors), accurate and repeatable power measurements.

The E4418A 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.

The E4418A is ideal for service and maintainence applications. Front and rear panel bumpers protect the E4418A from everyday knocks. The meter weighs only 4 kg (9lbs), and a bail handle makes it easy to carry.

Because the E4418A 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.

HP E4419A Dual-Channel Power Meter

The HP E4419A 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 E series of power sensors. Depending upon which sensor is used, the HP E4419A 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 E4419A makes fast (up to 100 readings per second with E-series sensors), accurate and repeatable power measurements. The HP E4419A is a true dual-channel power meter, which means that you get two simultaneous power readings on the display.

The E4419A 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 set-up sequences.

Because the E4419A power meter is code compatible with the HP 438A and is the same height (88.5 mm /3.5 in) and width (212.6 mm/8.5 in) as the HP 438A, this makes it easy to substitute into rack-mount automatic-test-equipment systems.

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 E-series sensors
Single Sensor Dynamic Range:
90 dB maximum (HP E-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 ± 0.5% (linear). Add the corresponding power sensor linearity percentage
Relative: ± 0.04 dB (log) or ± 1.0% (linear). Add the corresponding power sensor linearity percentage

Power Reference
Power Output: 1.00 mW (0.0 dBm). Factory set to ± 0.7%, traceable to the U.S. National Institute of Standards and Technology (NIST)
Accuracy: ± 1.2% worst case (± 0.9% rss) for one year

Key Literature

EPM Power Meters and E-Series Power Sensors Brochure, p/n 5965-6380E
EPM Power Meters and E-Series Power Sensors Technical Specifications, p/n 5965-6382E
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 E4418A Power Meter
HP 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 MIL-STD-45662A Certificate of Calibration
Opt 1BP Supplies MIL-STD-45662A Certificate of Calibration with data
Opt UK6 Supplies commercial calibration certificate with test data