

Table 1-1. Specifications

SPECIFICATIONS

Frequency Range:

100 kHz to 26.5 GHz (depending on power sensor used).

Power Range:

(display calibrated in watts, dBm, and dB relative to reference power level).

With 8481A, 8482A, or 8483A sensors: 50 dB with 5 full scale ranges of -20, -10, 0, 10, and 20 dBm (10 μ W to 100 mW).

With 8481B or 8482B sensors: HP 8481B is 44 dB (1 mW to 25W) at 0 to 35°C and HP 8482B is 43 dB (1 mW to 20W) at 35°C to 55°C with 5 ranges of 10, 20, 30, 40 and 43 or 44 dBm.

With 8481H or 8482H sensors: 45 dB with 5 ranges of 0, 10, 20, 30 and 35 dBm (1 mW to 3W).

With 8484A sensor: 50 dB with 5 full scale ranges of -60, -50, -40, -30, and -20 dBm (1 nW to 10 μ W).

Accuracy:**Instrumentation¹:**

Watt mode: $\pm 0.5\%$.

dBm mode: ± 0.02 dB ± 0.001 dB/°C³

dB [REL] mode²: ± 0.02 dB ± 0.001 dB/°C³

Zero: Automatic, operated by front panel switch.

Zero set: $\pm 0.5\%$ of full scale on most sensitive range. typical, ± 1 count on other ranges.

Zero carry over: $\pm 0.2\%$ of full scale when zeroed on the most sensitive range.

Noise (typical, at constant temperature, peak change over any one-minute interval): 20 pW (8484A); 40 nW (8481A, 8482A, 8483A); 4 μ W (8481H, 8482H).

Drift (1 hour, typical, at constant temperature after 24-hour warm-up): 20 pW (8484A); 10 nW (8481A, 8482A, 8483A); 1.0 μ W (8481H, 8482H).

Power Reference: Internal 50 MHz oscillator with Type N Female connector on front panel (or rear panel, Option 003 only).

Power output: 1.00 mW.

Factory set to $\pm 0.7\%$, traceable to the National Bureau of Standards.

Accuracy: $\pm 1.2\%$ worst case ($\pm 0.9\%$ rss) for one year (0°C to 55°C).

Response Time:

(0 to 99% of reading, five time constants)

Range 1 (most sensitive) <10 seconds.

Range 2 <1 second

Range 3-5 <100 milliseconds.

(Typical, measured at recorder output).

Cal Factor:

16-position switch normalizes meter reading to account for calibration factor or effective efficiency. Range 85% to 100% in 1% steps.

Cal Adjustment:

Front panel adjustment provides capability to adjust gain of meter to match power sensor in use.

Recorder Output:

Proportional to indicated power with 1 volt corresponding to full scale and 0.316 volts to -5 dB; 1 k Ω output impedance, BNC connector.

RF Blanking Output:

Open collector TTL; low corresponds to blanking when auto-zero mode is engaged.

Display:

Digital display with four digits, 20% over-range capability on all ranges. Also, uncalibrated analog peaking meter to see fast changes.

Power Consumption:

100V $\pm 10\%$, 48 to 66 Hz and 360 to 440 Hz.

120V +5%, -10%, 48 to 66 Hz and 360 to 440 Hz.

220 or 240V +5%, -10% 48 to 66 Hz.

Typically less than 24 watts (<25 watts for Opt. 022), 60 V·A maximum.

Dimensions:

134 mm High (5-1/4 inches).

213 mm Wide (8-3/8 inches).

279 mm Deep (11 inches).

Net Weight: 4.5 kg (10 lbs).

¹Includes sensor non-linearity. Add +2, -4% on top range when using the 8481A, 8482A, or 8483A power sensors.

²Specifications are for within range measurements. For range-to-range accuracy add the range uncertainties.

³Referenced to 25°C.