

Comparison_between_HP-Agilent_435A_and_435B_Power_Meters

Feature/Specification	HP435A	HP 435B
Specifications		
Frequency Range	100 kHz to 18 GHz (sensor dependent)	100 kHz to 26.5 GHz (sensor dependent)
Temperature Range:	0° to 55° C	0° to 55° C
Power Range (calibrated in watts and dB in 5 dB steps)	With HP 848xB: +5 dBm (3 mW) to +44 dBm (25 W) full scale	With HP 848xB: +5 dBm (3 mW) to +44 dBm (25 W) full scale
	With HP 848xH: -5 dBm (0.3 mW) to +35 dBm (3 W) full scale	With HP 848xH: -5 dBm (0.3 mW) to +35 dBm (3 W) full scale
	With HP 848xA: -25 dBm (3 pW) to +20 dBm (100 mW) full scale	With HP 848xA: -25 dBm (3 pW) to +20 dBm (100 mW) full scale
	With HP 848xD: -65 dBm (300 pW) to -20 dBm (10 μW) full scale	With HP 848xD: -65 dBm (300 pW) to -20 dBm (10 μW) full scale
Accuracy		
Instrumentation Uncertainty	±1% of full scale on all ranges (0 to 55 degrees C)	±1% of full scale on all ranges
Zero	Automatic, operated by front-panel switch	Automatic, operated by front-panel switch
Zero Set	±0.5% of full scale on most sensitive range, typical	±0.5% of full scale on most sensitive range, typical
Zero Carryover	±0.5% of full scale	±0.5% of full scale
Power Reference	Internal 50 MHz oscillator with type-N female connector on front panel (or rear panel, Option 003 only)	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 ±0.7% traceable to the U.S. National Institute of Standards and Technology	1.00 mW. Factory set to ±0.7% traceable to the U.S. National Institute of Standards and Technology
Accuracy	±1.2% worst case (±0.9% rss) for one year (0 °C to 55°C)	±1.2% worst case (±0.9% rss) for one year (0 °C to 55°C)
General/Supplemental Characteristics		
Noise (typical, at constant temperature, peak change over any 1 minute interval)	20 pW (8484A); 40 nW(8481A, 8482A, 8483A) 40 μW (8481B, 8482B) 4 μW (8481H, 8482H)	20 pW (8484A); 40 nW(8481A, 8482A, 8483A) 40 μW (8481B, 8482B) 4 μW (8481H, 8482H)
Drift (1 hour, typical, at constant temperature after 24-hour warm-up)	40 pW (8484A); 15 nW(8481A, 8482A, 8483A) 15 μW (8481B, 8482B) 1.5 μW (8481H, 8482H)	40 pW (8484A); 15 nW(8481A, 8482A, 8483A) 15 μW (8481B, 8482B) 1.5 μW (8481H, 8482H)
Response Time (0 to 99% of reading)	2 seconds on 3 μW range 0.75 second on 10 μW range 0.40 second on 30 μW range and 100 milliseconds on all other ranges (Typical, time constant measured at recorder output)	Range 1 (most sensitive range) <10.0 seconds Range 2 <3.8 seconds Range 3 <1.3 seconds Range 4 to 10 <500 milliseconds (Typical, measured at recorder output)

Cal factor	16-position switch normalizes meter reading to account for calibration factor. Range 85% to 100% in 1% steps. 100% position corresponds to Calibration Factor at 50 MHz.	16-position switch normalizes meter reading to account for calibration factor. Range 85% to 100% in 1% steps.
Recorder Output	Linearly proportional to indicated power with 1 volt corresponding to full scale, 1 kohm output impedance, BNC connector	Linearly proportional to indicated power with 1 volt corresponding to full scale, 1 kohm output impedance, BNC connector
RF Blanking Output	Provides a contact closure to ground when auto-zero mode is engaged. Used for turning off RF input to sensor during auto-zeroing. BNC connector	Provides a contact closure to ground. Used for turning off RF input to sensor during auto-zeroing. BNC connector
Cal adj	Front-panel adjustment provides capability to adjust gain of meter to match power sensor in use.	Front-panel adjustment provides capability to adjust gain of meter to match power sensor in use.
Power Consumption	110 or 120 V (+5%, -10%), 48 to 66 Hz and 360 to 440 Hz; also 220 or 240 V (+5%, -10%), 48 to 66 Hz only: <20VA	110 or 120 V (+5%, -10%), 48 to 66 Hz and 360 to 440 Hz; also 220 or 240 V (+5%, -10%), 48 to 66 Hz only: <20VA