



Hughes 4577xH series of Thermistor Mounts are designed for use with the Hewlett-Packard Model 432 series power meters. These Temperature Compensated Thermistor Mounts are used in the power ranges from 10 μ W (- 20 dBm) to 10 mW (+ 10 dBm) in the frequency range of 26.5 to 166 GHz in eight waveguide bands. The temperature compensated feature of these mounts provides relatively drift-free operation in a changing ambient environment.

Calibration is provided every 5 GHz (additional calibration points available upon request) over any waveguide band through WR-10 waveguide (75 to 110 GHz). At each calibration

FEATURES:

frequency, a correction factor (in + dB) is shown on the label of the thermistor mount. This calibration correction factor takes into account all losses within the thermistor mount. The correction factor is added to the power meter reading to yield the value of true power. This is illustrated in the example below. The example supposes that a 1 mW (0 dBm) deflection is indicated on the power meter. The true power, based on the correction factor, would be the figures shown. A certificate of calibration is supplied with each unit. The thermistor is supplied and calibrated with an input waveguide section and standard flange, for ease of connection and use.

- Full Waveguide Bandwidth Power Measurements to 110 GHz.
- HP-432 Compatible • Temperature Compensated Stability
- Calibration Certification Supplied

HOW TO ORDER

Model Number:4577xH-xx00

Frequency Band	1: Ka 2: Q 3: U 4: V 5: E 6: W 7: F 8: D
Flange Type	1: Round 2: Square (Ka-band only)
Bandwidth	1: Full Band (available in Ka- through W-bands) 4: 20 GHz Bandwidth (available in W-band only; specify center frequency) 5: 10 GHz Bandwidth (available in F- and D-bands only; specify center frequency)

Example: To order a W-band Thermistor Mount at 94 GHz, specify 45776H-1400, center frequency 94 GHz for a 20 GHz bandwidth unit, or a 457776H-1100 for a 75-110 GHz full band unit.

SPECIFICATIONS

	Frequency Band (GHz) ⑥									
	Ka (26.5-40)	Q (33-50)	U (40-60)	V (50-75)	E (60-90)	W (75-110)	F (90-140)	D (110-166)		
Bandwidth (GHz)	Full	Full	Full	Full	Full	Full or 20	10	10		
Power	-20	-20	-20	-20	-20	-20	-20	-20		
Range	+10	+10	+10	+10	+10	+10	+10	+10		
	+27	+27	+27	+27	+22	+22	+22	+22		
Operating Resistance (ohms)	200	200	200	200	200	200	200	200		
VSWR (max)	2:1	2:1	2:1	2:1	2.3:1	2.3:1	2.5:1	2.5:1		
Number of Calibration Points (min)	6	5	5	6	7	9/5 ⑦	3	3		
Basic Accuracy, worse-case (± dB)	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.8		
Waveguide Size ①	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10	WR-8	WR-6		
Waveguide Flange ①	UG-599/U ② UG-381/U ②	UG-383/U	UG-383/U (mod)	UG-385/U	UG-387/U	UG-387/U (mod)	UG-387/U (mod)	UG-387/U (mod)		
									0.25/115	

Dimensions (inches (cm)) 1.8 (4.6) x 1.3 (3.3) Dia. Weight (lb/gr)
 ① Refer to page 157 for specifications and MIL specification cross reference ② Round Flange ③ Square flange
 ④ Sale operation ⑤ 100 nanosecond pulses, 1% duty cycle ⑥ Standards traceable to NBS exist only in WR-28, WR-22, WR-15 & WR-10 ⑦ Full-Band/Partial-Band.

CORRECTION FACTOR EXAMPLE ⑧

Frequency (GHz)	50	55	60	65	70	75
Correction Factor (+ dB)	0.65	1.15	0.70	0.80	1.25	1.00
Meter Reading (dBm/mW)	0/1	0/1	0/1	0/1	0/1	0/1
True Power (dBm/mW)	0.65/1.16	1.15/1.30	0.70/1.175	0.80/1.202	1.25/1.333	1.0/1.259

⑧ HP-432 power meter's calibration factor control set at 100% and mount resistance switch set at 200