

Power Meter

8400 SERIES PORTABLE POWER METER

- Compact, Portable
- Interchangeable Mounts
- Accurate to 26.5 GHz
- Field Replaceable Elements
- Rugged Design for Field Service



DESCRIPTION

The 8400 Series Mini-Power Meter is an inexpensive, portable and battery operated power measurement system. Consisting of the model 8441 power meter, the model 8440-01 extension cable and one or more of the 842X series of power mounts, this system allows accurate measurements at frequencies up to 26.5 GHz¹. Each 842X series power mount measures power over a 30 dB dynamic range and utilizes thermocouple based detection for true RMS averaged results, even with pulse modulated signals. Field service technicians have long used the 8400 series because of its rugged cast aluminum housing, high

accuracy and simple operation. Supplied in its own cushioned carrying case, the 8400 series is small enough to be carried to remote transmitter measurement areas, yet accurate enough to be used to set output levels for communication systems. Each power mount is color coded to denote its measurement range and the meter is supplied with corresponding color coded scales to simplify actual readings. Additionally, the model 8441 has a dBm to mW conversion chart mounted on its rear panel, to allow conversions of measured levels.

SPECIFICATIONS

The Model 8441 Meter is a universal meter that can be used with 842X Series Power Mounts. The meter movement and front panel switches are protected by the shape of the cast aluminum housing that contains an easily accessible separate battery compartment. Readings are displayed on its 1.5 inch (3.8cm) analog meter movement. Power mounts may be mounted directly on top of the model 8441 or through the Model 8440-01 extension cable. A complete operation and maintenance manual is supplied, along with a padded carrying case that houses the meter, ext. cable and one power mount.

¹ Previously available as a Model 8401 system. Units should now be ordered stating separate meter, extension cable and power mount part numbers.

Meter Type Size Scales	D'Arsonval 1.5 in (3.8 cm) 3, Color Coded
Dynamic Range	30 dB
Scale Ranges	0.1, 1.0, 10 mW
Scale Multipliers	x0.1, x1.0, x10
Battery Type Life	6.0V (2 ea.) NEDA 1410M 500 Hrs.
Size	4.7" x 2.7" x 1.75" 11.75 x 6.67 x 4.45 cm
Weight	1.3 lb., 0.6 kg
Accessories Supplied	Manual, Batteries and Carrying Case

SPECIFICATIONS—POWER MOUNTS

MODEL	FREQUENCY RANGE ^a	MEASUREMENT RANGE	OVERLOAD		VSWR (MAX)	CONNECTOR	REPLACEMENT ELEMENT
			CW	PEAK			
8420	10 MHz to 12.4 GHz	1 μ W to 1 mW	3 mW	0.1 W	1.5:1	Type "N" Male	818A
8421		10 μ W to 10 mW	30 mW	3.0 W			819A
8422		300 mW	30 W	820A			
8427	100 MHz to 26 GHz	100 mW to 100 mW	30 mW	5.0 W	2.0:1 ^b	3.5mm male ^c	4813

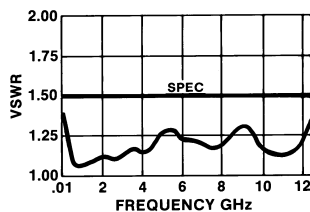
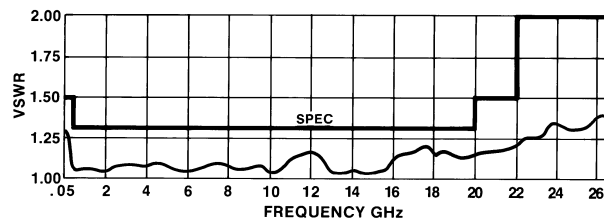
NOTES

a Frequency sensitivity all models ± 0.5 dB

b Model 8427 VSWR, 50 MHz to 22 GHz - 1.5:1, 75 MHz to 20 GHz - 1.3:1

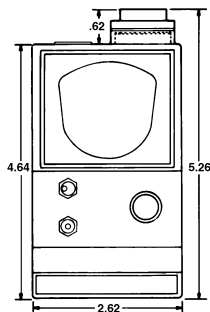
c Mates with SMA

TYPICAL VSWR PERFORMANCE

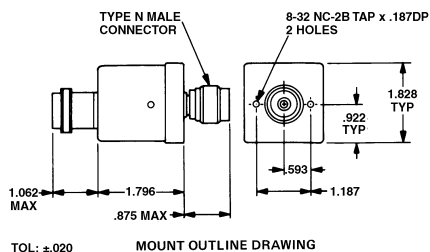
MODELS 8420,
8421, 8422

MODEL 8427

OUTLINE DRAWINGS

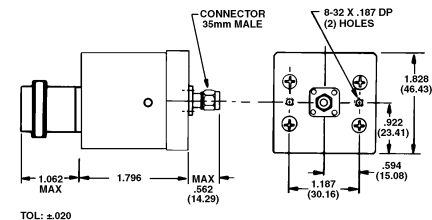
TOL: ± 0.03

MODEL 8441

TOL: ± 0.020

MOUNT OUTLINE DRAWING

MODELS 8420, 8421, 8422

TOL: ± 0.020

MODEL 8427