

Appendix B **Model 2530 1GHz Calibrator**

MODEL 2530 1 GHz CALIBRATOR

The Model 2530 operates as an optional accessory of the Model 4531 and 4532 RF Power Meters to provide calibration and test signals at an output frequency of 1.024 GHz. The Model 2530 is controlled by the power meter through its manual and remote programming systems and GPIB commands are defined for it. The 1.024 GHz calibrator is necessary for sensors that cannot be calibrated at 50 MHz because of a higher low-frequency cutoff. It is also closer to commonly used frequencies for telecom applications, and can reduce measurement uncertainty by requiring less interpolation of sensor frequency cal factors. The Model 2530 calibrator must be connected to the 4530 powermeter using the supplied RJ-11 control cable as shown in the diagram on the following page.

Accessories

Supplied accessories:	1 - NEMA type power cable 1 - RJ-11 Control Cable 1 - Fuse kit 1 - 2530 Operators Instruction Manual
Other accessories:	Rack Mounting Kit

Specifications

RF Section

Operating Modes:	CW, Internal or external pulse
Output Frequency:	1.024 GHz \pm 0.005%
Level Range:	-60.0 to +20.0 dBm
Resolution:	0.1 dB
Source SWR (Refl. Coef.):	1.20 (0.091) maximum, CW mode
Accuracy (NIST traceable):	+20 to -40 dBm
Absolute:	\pm 0.065 dB (1.5%) at 0 dBm, CW mode
Linearity:	\pm 0.03 dB per 5 dB from 0 dBm, CW mode
Harmonics:	-35 dB minimum to 40 GHz
Spurious:	-60 dB minimum

Pulse Generator

Internal Pulse Period:	100 ms, 1 ms or 10 ms
Internal Pulse Duty Cycle:	10% to 90% in 10% increments
Pulse polarity:	+ or – for Internal and External pulses
RF Connector:	Type N, front or optional rear panel location
External Pulse Modulation Input:	Type BNC, rear panel, TTL compatible
Controller connector:	RJ-11
Controller:	Boonton Electronics Model 4531/4532 RF Power Meter

Miscellaneous

Power requirements:	90 to 260 VAC, 47 to 63 Hz, < 50 VA, < 30 watts No voltage switching required.
Cooling:	Internal fan.
Dimensions:	3.5 inches (8.9 cm) high, 8.4 inches wide (21.3 cm), approx. 13.5 inches (34.3 cm) length, not including removable feet and connector clearances.



External Calibrator Connection Diagram