Model F1125/M1125

RF CALIBRATION AND MEASUREMENT PRODUCTS

- **Used to calibrate RF Power Sensors in the 100 kHz to 4.2 GHz frequency range**
- **Standards are directly traceable to NIST**
- **Thermistor Standards are temperature controlled**
- **0.01 to 25 mW dynamic range**
- **Primary and Working Transfer Standard configurations**
- **Rack mount kit available**
- **Optional A2LA Accredited ISO/IEC 17025:1999 Compliant Calibration**

Coaxial RF Power Transfer Standards

TEGAM Temperature Stabilized Coaxial RF Power Transfer Standards enable the precise measurement of microwave power in the 100 kHz to 4.2 GHz frequency range.

These units are extremely rugged, highly accurate, and stable with time and temperature. They are ideal for use as standards for the transfer of calibration factors to other RF standards and power sensors. Units are supplied with ANSI/NCSL Z540-1-1994 NIST traceable calibration data. A2LA Accredited Calibrations are optional.

These models are designed for use with DC self-balancing bridges such as the TEGAM Model 1806, 1806A and 1804, or with controllers such as the TEGAM Model 1805B.

System configurations employing instruments of this extreme accuracy typically achieve calibration factor transfer results normally found only in primary standards laboratories.

The Model F1125 is a feedthrough Thermistor Standard and Power Splitter combination used for the calibration of bolometer, thermocouple, and diode terminating power sensors.

The Model M1120 is a terminating thermistor Primary Transfer Standard. It is designed to be calibrated directly by a national standards agency such as NIST. The M1120 is used for the calibration of feedthrough devices such as bolometer mount-coupler and bolometer mount-splitter RF Standards. It is also useful in other applications requiring direct measurement of RF power.

Both Models feature a Type N RF connector. Bias connectors are binding posts with standard 0.75 in. spacing for banana plugs. The internal heater is connected using cables provided with the Models F1125, 1805B, 1806, and 1820.

Prices and specifications subject to change without notice.

TEGAM®

YOUR GLOBAL SOURCE FOR TEST AND MEASUREMENT SOLUTIONS

Model F1125/M1125

COAXIAL RF POWER TRANSFER STANDARDS

Specifications

	F1125	M1125
Frequency Range	100 kHz to 4.2 GHz	100 kHz to 4.2 GHz
Power Range	0.01 to 25 mW (-20 to 14 dBm)	0.01 to 25 mW (-20 to 14 dBm)
Nominal Impedance	50 Ohms	50 Ohms
Max VSWR	1.06 from 100 kHz to 4.2 GHz	1.40 from 100 to 500 kHz 1.20 from 0.5 to 1 MHz 1.10 from 1 to 1000 MHz 1.20 from 1 to 4.2 GHz
Power Linearity	<0.1 % from 1 to 10 mW	<0.1 % from 1 to 10 mW
Insertion Loss	6 dB, 8.5 dB max	1 dB max
Individual calibrations traceable to NIST supplied at the following frequencies:	100, 200, 300, 455, 500 kHz 1, 1.25, 3, 5 MHz 10 to 100 MHz in 10 MHz steps 0.1 to 2 GHz in 50 MHz steps 2 GHz to 4 GHz in 100 MHz steps 4.2 GHz	100, 200, 300, 455, 500 kHz 1, 1.25, 3, 5 MHz 10 to 100 MHz in 10 MHz steps 0.1 to 2 GHz in 50 MHz steps 2 GHz to 4 GHz in 100 MHz steps 4.2 GHz
Calibration Factor Accuracy	+/-0.80 % from 0.1 to 10 MHz +/-0.90 % from 10 to 4200 MHz	+/-1.0 % from 0.1 to 10 MHz +/-1.1 % from 10 to 4200 MHz
Calibration Factor Drift	<0.5 % per year	<0.5 % per year
Thermistor DC Bias Power	30 +/- 0.7 mW	30 +/- 0.7 mW
Thermistor Resistance at Bias	200 Ohms	200 Ohms
Thermistor Power Sensitivity	Approximately 13 Ohms/mW	Approximately 13 Ohms/mW
Temperature		
Operating	+12 ºC to +40 ºC (+54 ºF to +104 ºF)	+12 ºC to +40 ºC (+54 ºF to +104 ºF)
Storage	-55 ºC to +75 ºC (-67 ºF to +167 ºF)	-55 ºC to +75 ºC (-67 ºF to +167 ºF)
Warm up time	2 hours	2 hours
Weight	2.5 kg (5.5 lb)	1.3 kg (2.875 lb)
Physical Dimensions		
Height	88.9 mm (3.5 in)	73.15 mm (2.88 in)
Width	215.9 mm (8.5 in)	101.6 mm (4.00 in)
Depth	390.7 mm (15.4 in)	189.23 mm (7.45 in)
Included Accessories		
Operation Manual	P/N IM-300	
Heater Cable for F1125	P/N CBL-F1125-48	
Optional Accessories		
RF Mount Transport Case for F1125	P/N 8010	
RF Mount Transport Case for M1125	P/N 8000	
3 in. Stand for M1125	P/N M11XX-STAND	
Rack Mount Kit for F1125	P/N F1120-RMK	
A2LA Accredited ISO/IEC 17025:1999 Compliant Calibration for F1125 or M1125	P/N OPT-A2LA	

ACCREDITED
Certificate no. 2018.01

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