RF CALIBRATION AND MEASUREMENT INSTRUMENTS

6 kHz to 18 GHz Coaxial RF Power Transfer Standards

- Calibrate RF Power Sensors from 6 kHz to 18 GHz
- PMX & SYSIIB Compatible
- 0.01 to 10 mW operating range (-20 to +10 dBm)
- Primary (1505A) and Working (2505A) Transfer Standard configurations
- Rack mount option available

TEGAM Temperature Stabilized Coaxial RF Power Transfer Standards enable the precise measurement of microwave power in the 6 kHz to 18 GHz frequency range.

These standards are highly accurate and stable with time and temperature. They are ideal for use as standards to calibrate RF power sensors from all manufacturers.

The calibration of these standards is traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) or other recognized National Metrology Institutes.

These RF Power Standards work with TEGAM's new 1830A RF Power Meter, as well as our legacy DC Self-Balancing Bridges, 1806 and 1806A.

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

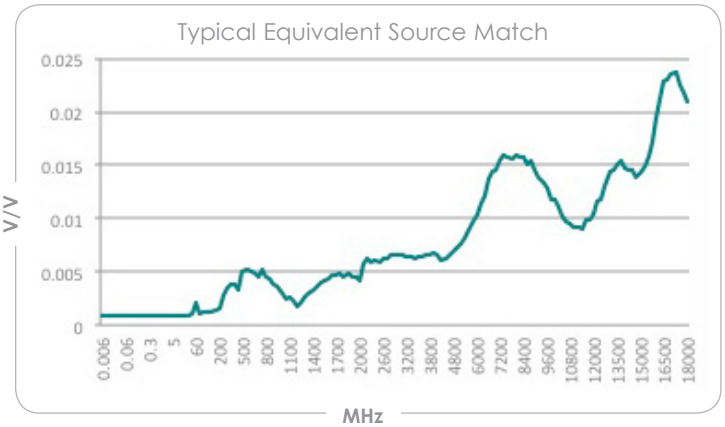
The Model 2505A is a feedthrough Thermistor Standard used for the calibration of bolometer, thermo-couple, and diode terminating power sensors.

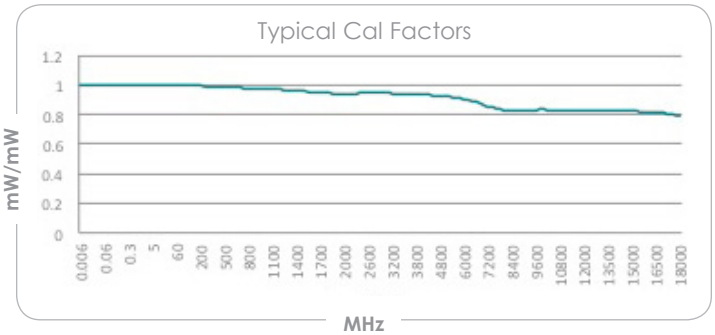
The Model 1505A is a terminating thermistor Primary Transfer Standard. The 1505A is used for the calibration of the 2505A standard and power meter 50 MHz reference outputs. It is also useful in other applications requiring direct measurement of RF power.

The Model 2505A features a Type N female connector, and the 1505A features a compatible Type N male connector.

Performance Graphs

2505A





Prices and specifications subject to change without notice.
1505A/2505A-909 Rev C

General Specifications		
Frequency Range	6 kHz to 18 GHz	
Max Power	25 mW (+14 dBm)	
RF Impedance	50 Ohms nominal	
Power Linearity	<0.1% from 1 to 10 mW	
Typical Usable Range	-20 dBm to +10 dBm typical *(Depends on noise floor and resolution of DC instruments)*	
Calibration Factor Drift	<0.5% per year	
Individual Calibration factors are supplied standard at the following frequencies.	6 kHz, 9 kHz, 20 kHz to 100 kHz in 10 kHz steps 200 kHz, 300 kHz, 455 kHz, 500 kHz 1 MHz, 1.25 MHz, 3 MHz, 5 MHz 10 MHz to 90 MHz in 10 MHz steps 100 MHZ to 1950 MHz in 50 MHz steps	2 GHz to 3.9 GHz in 100 MHz steps 4 GHz to 12.4 GHz in 200 MHz steps 12.75 GHz to 18 GHz in 250 MHz steps
Thermistor DC Bias Power	Approximately 35 mW (nominal)	
Thermistor Resistance at Bias	200 Ohms (set by balancer)	
Temperature: Operating Storage	+15° to +30° C (+59° to +86° F) -55° to +75° C (-67° to +167° F)	

Individual Model Specifications	Model 2505A	Model 1505A
Frequency Range	6 kHz to 18 GHz	6 kHz to 18 GHz
Typical Equivalent Source Match |Γ|(V/V)	6 kHz to 6 GHz: 0.03 6 GHz to 15 GHz: 0.05 15GHz to 18 GHz: 0.07	6 kHz to 1 MHz: 0.03 1 MHz to 100 MHz: 0.02 100 MHz to 2 GHz: 0.03 2 GHz to 8 GHz: 0.12 8 GHz to 12 GHz: 0.15 12 GHz to 18 GHz: 0.25
Loss from Input Port to DUT Port	8.5 dB (typical)	N/A
Calibration Factor Accuracy (typical)	+/-0.70% from 6 kHz to 10 MHz +/-0.80% from 0.01 to 10 GHz +/-1.00% from 10.0 to 18 GHz	+/-0.90% from 6 kHz to 10 MHz +/-1.00% from 0.01 to 10 GHz +/-1.20% from 10.0 to 18.0 GHz
Test Port Connector	Type N Connector Female	Type N Connector Male, 3/4"
Weight	2.9 kg (6.3 lb)	544.3 g (1.2 lb)
Physical Dimensions: Height Width Depth	10.5 cm (4.1 in) 21.7 cm (8.5 in) 33.8 cm (13.3 in)	7.2 cm (2.8 in) 8.2 cm (3.2 in) 13.8 cm (5.4 in)

Accessories	Model	Product Description
Cables	CA-21-15	Cable, Voltage Bias and Heater, 1830A to 15XX/25XX, 15"
	CA-21-48	Cable, Voltage Bias and Heater, 1830A to 15XX/25XX, 48"
	CA-28-48	Cable, Voltage Bias and Heater, 1806A to 2505A/1505A, 48"
	CA-29-48	Cable, Voltage Bias and Heater, 1806 to 2505A/1505A, 48"
Wrench	2510-910-01	Torque wrench, 3/4", 12 in-lbs, N (standard nut)
Cases	1500-910	Transport Case for 1505A RF Power Standard (Included with 1505A)
	2500-910	Transport Case for 2505A
Rack Mounting for Model 2505A		(Single) 1830-910 – (Dual) 1830-911