

MODEL 1825

RF CALIBRATION AND MEASUREMENT PRODUCTS

- Calibrates 10 MHz to 18 GHz RF power sensors from Agilent (HP), Anritsu, Boonton, Gigatronix, Rohde & Schwarz, TEGAM and others
- 1/3 the cost of a basic System IIA
- Ideal for labs with annual calibration workloads of 25 RF power sensors or less
- Can calibrate many popular sensors in 30 minutes or less
- The accuracy and reliability you have come to expect from TEGAM
- No software to learn
- Compact and easy to use
- All connectors are located on the front panel for easy connection
- Rack mount kit available

NOTE: Customer must provide an appropriate RF Signal Source, DVM and an RF Power Meter for the UUT

Economical RF Power Sensor Calibrator

The Model 1825 RF Power Sensor Calibrator is an accurate, economical, and reliable instrument for calibrating RF Power Sensors in the 10MHz to 18 GHz frequency range. This instrument detects the level of RF power being applied to an RF power sensor. Resulting voltage readings are measured by the customer-supplied DVM. Cal factors for the UUT are determined by comparing the readings of the DVM with the readings of the customer-supplied Power Meter. Cal factors are obtained by performing a few simple calculations. A MicroSoft Excel spreadsheet with the formulas inserted is included with the instrument.

The Model 1825 is a low-cost, non-automated version of the popular TEGAM System IIA. No additional software is supplied or required. The Model 1825 offers the same accuracy and reliability as other TEGAM test instruments. The 1825 is not a microprocessor-controlled instrument, but it is simple to operate. Since measurements are taken with an external DVM, the 1825 could be integrated into an automated workstation depending on the DVM used and the customer's ability to provide the appropriate software.

The Model 1825's built-in Thermistor RF Power Standard is internally temperature controlled, so changes in ambient temperature will not affect power measurements. The Type IV Bridge Circuitry detects RF power by using the DC power substitution method. DC power levels can be measured to within $\pm 0.003\%$.

The Model 1825 is simple to operate. To calibrate a power sensor, the operator connects the output from the customer-supplied RF signal generator to the RF INPUT of the 1825 and the + and - input of the customer-supplied voltmeter to the VOLTMETER red and black binding posts on the 1825. Connect the UUT to a customer-supplied compatible power meter and to the SENSOR port of the 1825 and start taking measurements. The DVM and Power Meter readings are then used in some simple calculations to determine the cal factor of the UUT at the selected frequency. These calculations can be performed by the user or by entering the meter readings into the MicroSoft Excel spreadsheet provided by TEGAM. This spreadsheet contains the formulas necessary to calculate cal factor and is provided as a convenience for our customers.



TEGAM®

YOUR GLOBAL SOURCE FOR TEST
AND MEASUREMENT SOLUTIONS

Specifications

Frequency Range	10 MHz to 18 GHz
Power Range	10 μ W to 25 mW
Typical Power Measurement Accuracy	$\pm(0.03\% + 2 \mu\text{W})$ when used with Fluke Model 8505A, 8506A, Agilent (HP) 3458A or equivalent voltmeters
Substitution Bridge Accuracy	$\pm 0.003\%$.
RF Impedance	50 Ohms nominal
SWR	≤ 1.10
Insertion Loss (RF INPUT)	6 dB nominal, 7.5 dB max
Calibration	Individual calibrations traceable to NIST supplied at the following frequencies: 10 to 100 MHz in 10 MHz increments 100 MHz to 2 GHz in 50 MHz increments 2 GHz to 4 GHz in 100 MHz increments 4 to 12.4 GHz in 200 MHz increments 12.75 to 18 GHz in 250 MHz increments
Connectors SENSOR RF IN VOLTMETER	N-type Female SMA Female Binding Post, standard 0.75" spacing for banana plugs
Temperature Operating Storage	+12° to +32° C (+54° to 90° F) -40° to +75° C (-40° to +167° F)
Warm up time	2 hours minimum from instrument power up
Power Requirements a factory installed option.	12 Watts, 47 to 420 Hz, 105 to 125 Vac standard or 210 to 250 Vac with
Weight	16.2lbs (7.4 kg)
Physical Dimensions Height Width Depth	88.9 mm (3.5 in) 457.2 mm (18 in) 390.7 mm (15.4 in)
Rack Mounting	The Model 1825 can be mounted in a standard 19" rack, with rack mount kit RM-1825
Additional Equipment Required: Signal Generator DVM RF Power Meter	10 MHz to 18GHz Frequency Range, Continuous Wave, 6dBm minimum power output. DC Volts, 6 1/2-digit minimum. Compatible with the sensor under test.



Certificate no. 2018.01



YOUR GLOBAL SOURCE FOR TEST
AND MEASUREMENT SOLUTIONS

TEN TEGAM WAY • GENEVA, OHIO 44041
440-466-6100 • FAX 440-466-6110
www.tegam.com • e-mail: sales@tegam.com