



# 2818A 9 kHz to 18 GHz RF Power Transfer Standard

From ADVANCED ENERGY / TEGAM, the leaders in power sensor calibration.



**TRUST** is an essential feature in any measurement tool, and TEGAM’s new 2818A RF Power Transfer Standard is a tool you can **rely on every day** with confidence.

Built upon proven technologies the 2818A offers new features and advantages in a RF Power Transfer Standard. Utilizing TEGAM’s transfer standard techniques applied to an internally-referenced thermoelectric sensor, **the 2818A performs faster** while retaining excellent overall performance and accuracy.

With a USB communication port, the 2818A **operates without a power meter**. Utilizing PS-CAL and a PC for data collection and as a digitized power meter, you retain the benefit of making manual measurement when you want them and collecting power readings automatically when a visual power reading is not needed. Eliminating a separate power meter also means less equipment to calibrate and less space needed on the bench or in the rack.

The 2818A is EEPROM based with the **calibration constants stored within the sensor**, eliminating the need for a separate electronic data media. Connect the 2818A to the PC, apply RF power, and read the corrected power level without applying calibration factors separately.

TEGAM’s PS-CAL® software has been updated to work with the 2818A in an automated power sensor calibration system. To accelerate your workload with the 2818A, you can now speed up the power sensor calibration process without sacrificing accuracy by adjusting the dwell time. The 2818A is **over four times as fast** as our current solution at settling on a power reading and transfers the time savings to your power sensor calibration workload.

Assembled in a familiar package, the 2818A will **fit into the same space** as an existing TEGAM RF Transfer standard, including utilization of the same rack-mount system. This allows the 2818A to drop into current TEGAM system locations without having to reconfigure the space. The 2818A is usable on the bench or in a rack and is ready to work for you.

Turn the 2818A into a **fully automated** power sensor calibration system. TEGAM specializes in Turn-Key RF power sensor calibration systems with decades of experience. We can help you to convert your existing TEGAM power sensor calibration system to utilize the 2818A or we can build one from the ground up. Our systems make it easier to add power sensor calibration capability to your laboratory. Contact us today to learn more.

TEGAM’s 30 years of microwave power measurement experience and field-proven instruments provide **measurements you can trust**.

**When the Measurement Matters, Be Certain with TEGAM.**

**2818A Specifications**

<b>Frequency</b>	9 kHz to 18 GHz	
<b>Power</b>	Typical usable range: -20 to +10 dBm (0.01 to 10 mW) Calibrated attenuator(s) available to extend the dynamic range.	
<b>Calibration Factor Accuracy (typical)</b>	9 kHz to <10 MHz	±0.80%
	10 MHz to <10 GHz	±0.90%
	10 GHz to 18 GHz	±1.0%
<b>Reflection Coefficient / Equivalent Source Match at Test Port (typical) <math> \Gamma (V/V)</math></b>	9 kHz to <6 GHz	0.03
	6 GHz to <15 GHz	0.05
	15 GHz to 18 GHz	0.07
<b>Individual Calibration Factors Supplied at the following frequencies</b>	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.	
<b>RF Impedance (nominal)</b>	50 Ω	
<b>Calibration Factor Drift</b>	<0.5% per year	
<b>Test Port Connector</b>	Type N Female	
<b>Zero Drift and Zero Set Accy (typical after warm up)</b>	Drift: +/- 5.5nW/hr / Set: +/- 25nW	
<b>RF Input Port</b>	SMA Female	
<b>Communication Interface</b>	USB, type A 2.0 connector (rear panel)	
<b>Dimensions (W x H x D)</b>	21.7 x 10.5 x 33.8 cm / 8.5 x 4.1 x 13.3 in.	
<b>Operating Temp/Humidity</b>	15 to 30 °C (59 to 86 °F) / < 75%RH non-condensing	
<b>Storage Temp/Humidity</b>	-40 to +70 °C (-40 to 158 °F) <90%RH non-condensing	
<b>Minimum Warm-up Time</b>	2 hours from storage in operating range environment	
<b>Weight (approximate)</b>	2.9 kg	6.3 lbs
<b>Warranty</b>	3-year parts and workmanship	
<b>Calibration Interval</b>	1-year	
<b>Compatible Software</b>	PS-Cal 4.8 or higher by ADVANCED ENERGY / TEGAM	