



AMBIENT TERMINATION

DC TO 8.5 GHz, 14mm (GR900) CONNECTOR

Description

The model 2459A1 precision ambient termination is an accurate and stable load for precision microwave noise temperature measurements and calibration. It can be used to perform accurate Y factor measurements in conjunction with a cold or hot source such as the model MT7118J cryogenic termination or model MT7108A thermal termination. The model 2459A1 can also be used as an "on line" standard for calibrating the operating noise temperature of low noise receiving systems. ¹

The model 2459A1 consists of a low VSWR coaxial termination supplied with a 14mm (GR 900) connector and housed in a copper heat sink for long term stability. The temperature is read from a direct reading dial thermometer calibrated from -5°C to 45°C with 0.5°C resolution and accuracy.

Maury produces a comprehensive line of precision ambient terminations in both coaxial and waveguide structures for precision noise measurement applications. Calibration is available at user specified frequencies in addition to or in place of the standard frequencies listed under *Specifications*. Please contact our Sales Department for assistance in configuring the ideal solution for your application.



Specifications

Frequency Range	DC to 8.5 GHz
VSWR	1.02 maximum (<1.01 typical), DC to 1 GHz
	1.04 maximum (<1.025 typical), 1 to 4 GHz
	1.06 maximum (<1.05 typical), 4 to 8.5 GHz
VSWR Stability	Less than 0.005 VSWR over its temperature range
Equivalent Noise Temperature	Prevalent ambient ²
Thermometer (provided)	Maury 299-T-001 ³
Temperature Range (Environmental)	-5°C to 45°C ⁴
Calibration Provided	VSWR @ 1.0, 4.0, and 8.5 GHz
Power Handling	1 watt cw
Connector	GR900 (14mm)
Weight	Approximately 2 lbs.
Accessories Provided	Instrument case 2459-5

¹ Stelzreid, C. T., "Operating Noise-Temperature Calibrations of Low Noise Receiving Systems", Microwave Journal, June 1971.

² Accuracy of input equivalent noise temperature is determined by accuracy of temperature measuring instrument.

³ Dial thermometer, thread in stem type, calibrated from -5°C to 45°C in 0.5°C increments and with an accuracy of better than 0.5°C.

⁴ Environmental temperature range based on dial thermometer provided, range can be extended. Consult us for application.