

Sliding Shorts

General Information

A sliding short is a movable short circuited termination in a precision air line which is used in a variety of laboratory measurement applications. These devices are used to establish a reference plane in a transmission system, as tuning elements in the development of microwave components (mixers, amplifiers, etc.), and tuning high precision CW reflectometer systems. An important application is the calibration of vector network analyzers (VNA). The use of a sliding short for such a calibration is particularly effective when the VNA is to be used for the measurement of highly reflective devices.

The primary criteria for a quality coaxial sliding short are a) a precision transmission structure (air line), b) consistent low noise contacts on the inner and outer conductors and c) a precision connector. Maury manufactures coaxial sliding shorts with a range of performance and operational convenience features. Among the classes available are modular units with interchangeable connectors, high precision devices with dedicated connectors, and rugged general purpose units.

Modular Sliding Shorts

Models 2508A, 2518A, 8036A, 8779A, and 8779B

Features

- ▶ Broad Frequency Range
- ▶ Precision Air Lines
- ▶ Interchangeable Connectors

Description

The 2508A, 2518A, and 8036A sliding shorts are true modular instruments. These units are provided with interchangeable connector bodies and center conductors so that measurements may be made in type N (female or male), or 7mm with the 2508A and 2518A, or 3.5mm (female or male) with the 8036A.

The connectors used on these units are air-dielectric (beadless) and the center conductor is movable; therefore, with the aid of an appropriate connector gage, the center pin of the connector can be set to the desired interface condition.

Specifications

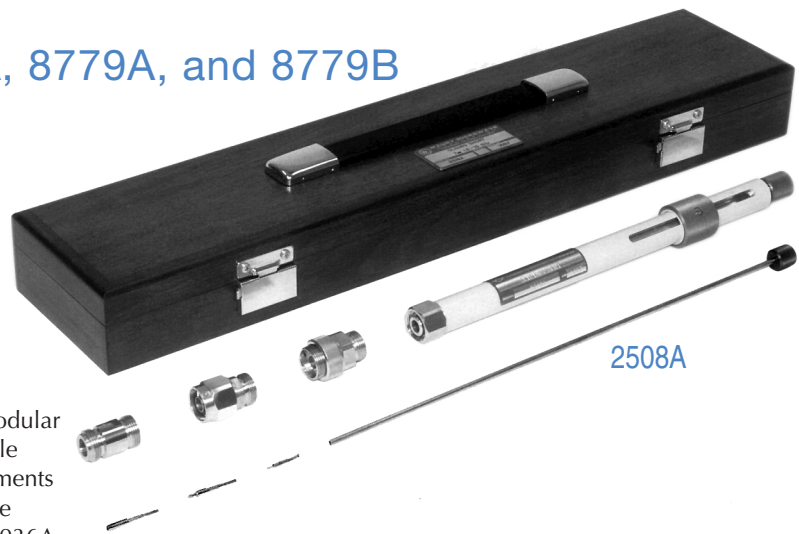
Frequency Range See Available Models Chart

VSWR (excluding transmission line loss):

2.92mm	4.0 to 18.0 GHz, 100:1 18 to 26.5 GHz, 75:1 26.5 to 40.0 GHz, 50:1
3.5mm	2.0 to 18.0 GHz, 100:1 18 to 26.5 GHz, 75:1 26.5 to 34.0 GHz, 50:1
7mm	2.0 to 18 GHz, 100:1
Type N	2.0 to 18 GHz, 100:1

Impedance 50 ohm ±0.3%

Travel > 1/2-λ at the lowest rated frequency



Available Models

MODEL	FREQUENCY RANGE (GHz)	CONNECTOR	AIR LINE ACCURACY ¹
2508A	0.9 – 18.0	LPC7 ² , Type N female and male	56 dB
2518A	1.8 – 18.0		
8036A	2.0 – 34.0	3.5mm female and male	44 dB
8779A1	4.0 – 20.0	2.92mm female	42 dB
	20.0 – 40.0		40 dB
8779B1	4.0 – 20.0	2.92mm male	42 dB
	20.0 – 40.0		40 dB

¹ Equivalent return loss of the air line impedance (50 ohm ref.)

² Air interface connector with a spring loaded, self-centering center pin that mates with standard 7mm connectors.