Agilent Technologies

Agilent Technologies 83059 Precision 3.5 mm Coaxial Adapters (dc – 26.5 GHz)

Operating Note

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Dcoumentation Warranty

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Safety and Regulatory Information

Review this product and related documentation to familiarize yourself with safety markings and instructions before you operate the instrument. This product has been designed and tested in accordance with international standards.

WARNING

The WARNING notice denotes a hazard. It calls attention to a procedure, practice, or the like, that, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

CAUTION

The **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

Instrument Markings

	When you see this symbol on your instrument, you should refer to the instruments instruction manual for important information.
	This symbol indicates hazardous voltages.
	This symbol indicates that the instrument requires alternating current (ac) input.
	The CE mark is a registered trademark of the European Community. If it is accompanied by a year, it indicates the year the design was proven.
	The C-Tick mark is a registered trademark of the Australian Spectrum Management Community.
	The CSA mark is a registered trademark of the Canadian Standards Association.
1SM1-A	This text indicates that the instrument is an Industrial Scientific and Medical Group 1 Class A product (CISPER 11, Clause 4).

	This symbol indicates that the power line switch is ON.
	This symbol indicates that the power line switch is in STANDBY position.
	This symbol indicates that the power line switch is OFF

Safety Earth Ground

This is a Safety Class I product (provided with a protective earthing terminal). An uninterruptible safety earth ground must be provided from the main power source to the product input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, the product must be made inoperative and secured against any unintended operation.

Before Applying Power

Verify that the product is configured to match the available main power source as described in the input power configuration instructions in this manual. If this product is to be powered by autotransformer, make sure the common terminal is connected to the neutral (grounded) side of the ac power supply.

Overview

Agilent 83059 precision 3.5 mm coaxial adapters (dc to 26.5 GHz) provide:

- low SWR
- excellent repeatability
- low loss
- precision “Instrument Grade” 3.5 mm coax connectors
- ideal connector savers

Outstanding Performance

The Agilent 83059 instrument grade 3.5 mm coaxial adapters offer outstanding performance to 26.5 GHz. With SWR typically better than 1.05, these adapters are ideal for most connector saver and interconnect needs.

Applications

Out-of-specification SMA and poor quality 3.5 mm connectors can cause considerable damage to expensive test port connectors. The 83059 adapters offer test port safety without compromising measurement accuracy.

Use the 83059 adapters to perform adapter swap calibrations when testing non-insertible devices on network analyzers.

For general-purpose test and measurement applications, the 83059 adapters offer far better performance than most instrument grade adapters available today.

The 83059 adapters are available in kits of three, supplied with protective foam in an attractive wood box.

Specifications

Specifications describe the instrument's warranted performance over the temperature range 0 to 55 ˚C (except where noted). These characteristics are intended to provide information useful in applying the instrument by giving typical but non-warranted performance parameters. These are denoted as "typical," "nominal," or "approximate."

Table 1 Performance Characteristics (typical: 2-sigma from mean)

Model	Connector Type	Frequency (GHz)	Typical Minimum Return Loss[1]	Typical Maximum Insertion Loss[1,2]
83059A	3.5 mm (m-m)	dc to 26.5	–32 dB	0.074 dB
83059B	3.5 mm (f-f)	dc to 26.5	–32 dB	0.074 dB
83059C	3.5 mm (m-f)	dc to 26.5	–32 dB	0.074 dB
83059K (kit)	3.5 mm (m-m), (f-f), (m-f)	dc to 26.5	–32 dB	0.074 dB

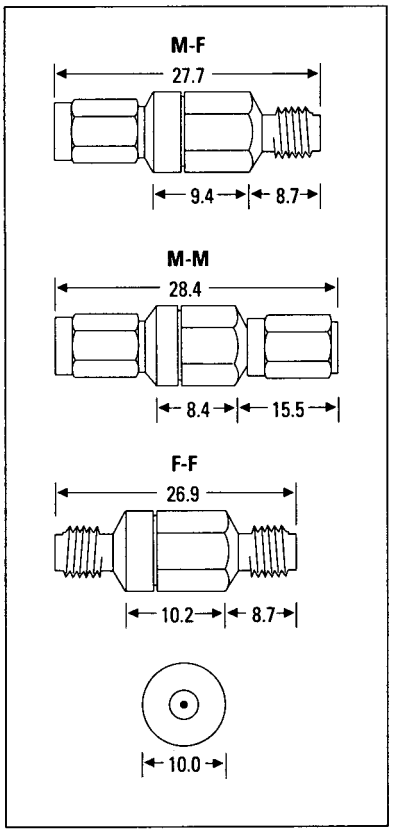
1. Typical measurements were taken from the (f-f) 83059B; they represent the worst case for the 83059 family.
2. Insertion loss values were derived using a short circuit technique; values displayed are half the measured "round trip" values.

NOTE

Instrument Grade connectors are intended for use with precision test and measurement equipment where maintaining high performance through many connect/disconnect cycles is of paramount importance. They feature the traditional slotted female contacts, rather than the slotless design used by *Metrology Grade* connectors.

Physical Characteristics

Dimensions



Weight 14 g each