1.0 mm accessories

The 1.0 mm connector is an IEEE industry standard connector with a cutoff frequency above 120 GHz. The connector utilizes an air dielectric interface for highest accuracy and repeatability. The coupling diameter and thread size were chosen to maximize strength, increase durability, and provide highly repeatable interconnects.

1.0 mm calibration kits

The Agilent 85059A is a 1.0 mm calibration/ verification kit designed for vector network analyzer systems operating over the frequency range of 45 MHz to 110 GHz. The opens, shorts and loads in this kit were optimized to provide accurate calibrations over the specified frequency range. For best results, the calibration techniques recommended are the openshort-load-thru (OSLT) calibration from 45 MHz to 50 GHz, and the offset-shorts calibration from 50 GHz to 110 GHz, all in one calibration sequence.

1.0 mm cables

The 11500I/J/K/L series of 1.0 mm coaxial cables are available for connecting test ports to devices, fixtures or probe tips with 1.0 mm connectors for frequency coverage from dc to 110 GHz. Performance data of 1.0 mm cables will equal or exceed the following, at frequencies up to 110 GHz:



Figure 9. Agilent 85059A, 1.0 mm calibration/verification kit



Figure 10. 1.0 mm accessories: (a) opens, shorts; (b) female-to-female test port cable; (c) 1.0 mm coax to V-band or W-band waveguide adapters; (d) 1.0 mm in-series adapters

Cable	Cable length	Return loss	Insertion loss	
11500I (F-F)	8.8 cm/3.45 in	17 dB min.	dc to 50 GHz	1.2 dB max
			50 to 75 GHz	1.4 dB max
			75 to 110 GHz	1.7 dB max
11500J (M-F)	16.0 cm/6.30 in	17 dB min.	dc to 50 GHz	2.25 dB max
			50 to 75 GHz	2.5 dB max
			75 to 110 GHz	3.2 dB max
11500K (M-F)	20.0 cm/7.87 in	16 dB min.	3.5 dB	
11500L (M-F)	24.0 cm/9.45 in	16 dB min.	3.8 dB	