



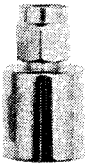
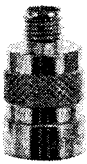


	
85052-60004*		85052-60003*	
			
1250-1784		1250-1785	
			
1250-1766		1250-1767	
			
1250-1768		1250-1769	
		*not supplied with option 001	
			
00909-60007		00909-60016	
Part or Model Number	Quantity	Description	
85052-60004	2	7 mm to 3.5 mm (m) 50Ω adapter (not included with option 001)	
85052-60003	2	7 mm to 3.5 mm (f) 50Ω adapter (not included with option 001)	
1250-1766	1	3.5 mm (m) 50Ω Open Circuit with Center Conductor Extender	
1250-1784		3.5 mm (m) 50Ω Center Conductor Extender (available separately)	
1250-1767	1	3.5 mm (f) 50Ω Open Circuit with Center Conductor Extender	
1250-1785		3.5 mm (f) 50Ω Center Conductor Extender (available separately)	
1250-1768	1	3.5 mm (m) 50Ω Short	
1250-1769	1	3.5 mm (f) 50Ω Short	
00909-60007	1	3.5 mm (m) 50Ω Termination	
00909-60016	1	3.5 mm (f) 50Ω Termination	
85033-80002	1	Storage Case	
85033-80008		Limited Calibration Label (not shipped with calibration kit)	
85033-80003	1	Storage Case Pad	

Figure 1-2. Contents of the HP 85033C Calibration Kit

WEIGHT

Net	0.8 kg (1.8 lb)
Shipping	1.4 kg (3.1 lb)

Section 2. Specifications

INTRODUCTION

This section gives the electrical, environmental and mechanical specifications for the devices in the calibration kit.

ELECTRICAL SPECIFICATIONS

The electrical specifications and characteristics of the devices in the calibration kit are listed in table 2-1.

Table 2-1

Device	Specification
3.5 mm (m) 50 Ω Termination and 3.5 mm (f) 50 Ω Termination*	DC to 3 GHz Return Loss \geq 40 dB 3 to 6 GHz Return Loss \geq 35 dB 6 to 26.5 GHz Return Loss \geq 24 dB

*Typical resistance change: ± 130 ppm/ $^{\circ}$ C

MECHANICAL SPECIFICATIONS

Table 2-2 shows the pin depth specifications for the devices in the calibration kit.

Table 2-2. Pin Depth Specifications

Device (or connector)	Specification
All 3.5 mm connectors in this kit (male or female) 7 mm end of type-N to 7 mm adapters*	Center conductor recession = 0.0 to 0.003 inch Center conductor recession with collet removed = 0.0 to 0.003 inch

*Not supplied in option 001

Figure 2-1 shows the dimension specified for the 3.5 mm connector.

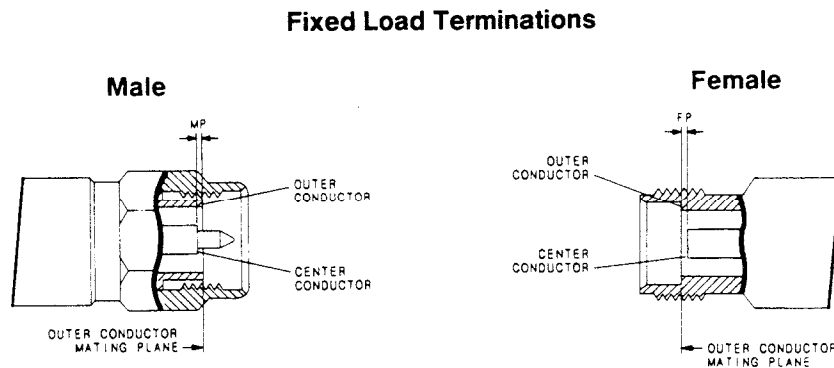


Figure 2-1. 3.5 mm Center Conductor Recession

ENVIRONMENTAL SPECIFICATIONS

Table 2-3 lists the environmental specification for the devices in the calibration kit.

Table 2-3. Environmental Specifications

Calibration Temperature Range	+15° to +35°C (+59° to +95°F)
Storage Temperature Range	−40° to +75°C (−40° to +167°F)
Barometric Pressure Operation	<4,500 meters (15,000 feet)
Storage	<15,000 meters (50,000 feet)
Relative Humidity Operation	Non-condensing at all times 0 to 80% (26°C maximum dry bulb temperature)
Storage	0 to 95%

TEMPERATURE

Temperature of the calibration devices is important because device dimensions (and therefore electrical characteristics) change with temperature. The temperature of the calibration devices and all connectors must be stable before use and within the operating tolerances shown above.

Remember that your fingers are a heat source, so avoid unnecessary handling of the devices during calibration.

Barometric Pressure and Relative Humidity

Barometric pressure and relative humidity affect device performance. Air exists between the inner and outer conductors of devices in this kit and the dielectric constant of air varies as pressure and humidity change.

VERIFYING SPECIFICATIONS

For each of the devices in the calibration kit, Hewlett-Packard establishes a traceable link to the United States National Institute of Standards and Technology (NIST, formerly NBS). This is accomplished by electrical comparison between devices in the calibration kit and factory reference standards.

The physical dimension of these factory standards are precisely measured and then their theoretical expected performance is determined. This method establishes a traceable link to NIST for Hewlett-Packard to the extent allowed by the Institutes's calibration facility.

CALIBRATION CYCLE/RECERTIFICATION

Hewlett-Packard recommends that, under normal usage, you calibrate your calibration kit annually. Normal usage is considered to be up to two instrument calibrations per day. Kits that receive higher usage may require recertification more often. Whenever you suspect that your calibration kit is aging or wearing out of specification, contact your nearest Hewlett-Packard Service Center about recertifying your kit.

LIMITED CALIBRATION/RECERTIFICATION

The 50 ohm terminations in this verification kit are specified up to 26.5 GHz. However, the calibration kit's other devices are designed for use below 6 GHz. When an HP 85033C calibration kit is recalibrated by a Hewlett Packard Service center, it will be assumed that the calibration kit is being used for applications below 6 GHz. Therefore, the 50 ohm loads will not be repaired or replaced based on their performance above 6 GHz. If you need the performance above 6 GHz, be sure to alert the service center to this fact.

If the calibration kit is being used with an HP 8752 or a standard HP 8753, the performance of the 50 ohm load above 3 GHz will not affect the accuracy of calibrated measurements. Therefore, repair or replacement of a 50 ohm termination which fails to meet its specifications above 3 GHz is an unneeded expense. To address this situation, a limited calibration is available.

A standard recertification will test and calibrate the devices in the calibration kit up to 6 GHz. You can request a limited calibration which would recertify the calibration kit devices up to 3 GHz. The limited calibration can extend the effective life of the calibration kit. (As the devices age and the connectors wear with use, it is likely that their performance will degrade at higher frequencies before the performance below 3 GHz is affected.)

To request a limited calibration make sure the following is clearly written on the order:

Limited Calibration DC-3GHz (option 030)

All loads which have a limited calibration will have a limited calibration label applied to the back of the device.