HP 85033C
3.5 mm CALIBRATION KIT

SERIAL NUMBERS

This manual applies directly to HP 85033C calibration kits that have serial number prefix 2920A.

For additional serial number information, see "SERIAL NUMBERS" in section 1.

MANUAL PART NO. 85033-90007

Printed: MAY 1990
Edition 3

HEWLETT PACKARD

Section 1. General Information

INTRODUCTION

The Hewlett-Packard 85033C 3.5 mm-calibration kit is designed to be used with network analyzer systems such as the HP 8752A or HP 8753A/B/C. The standard HP 85033C kit consists of opens, shorts, 50 ohm terminations and 3.5 mm to 7 mm adapters.

This manual describes the devices in the HP 85033C calibration kit and gives their environmental, mechanical and electrical specifications. It also provides instructions on the care and use of the devices.

CARING FOR THE CALIBRATION KIT

To obtain optimum performance from this calibration kit, follow these precautions:

- Keep the protective rubber end-caps on the adapters when possible.
- Make connections carefully to avoid misalignment and connector damage.
- Keep connectors free of dirt and metallic particles.
- If you must clean the connectors, try clean compressed air first. Do not use abrasives. If further cleaning is required, refer to "Cleaning Connectors" later in this manual.
- Periodically gage the device connectors using the instructions provided in the *Microwave Connector Care* manual (HP part number 08510-90064)

SERIAL NUMBERS

A serial number label is attached to this calibration kit. A typical serial number label is shown in Figure 1-1. The first four digits followed by a letter comprise the serial number prefix, the last five digits comprise the sequential suffix which is unique to each calibration kit. To comply with MIL-STD traceability customers may want to identify each device used when calibrating or verfying a system.

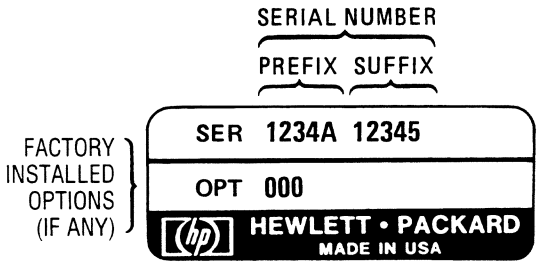


Figure 1-1. Typical Serial Number Label

INCOMING INSPECTION

Use Figure 1-2 to verify that your shipment is complete by matching the HP part number on devices with the part numbers listed.

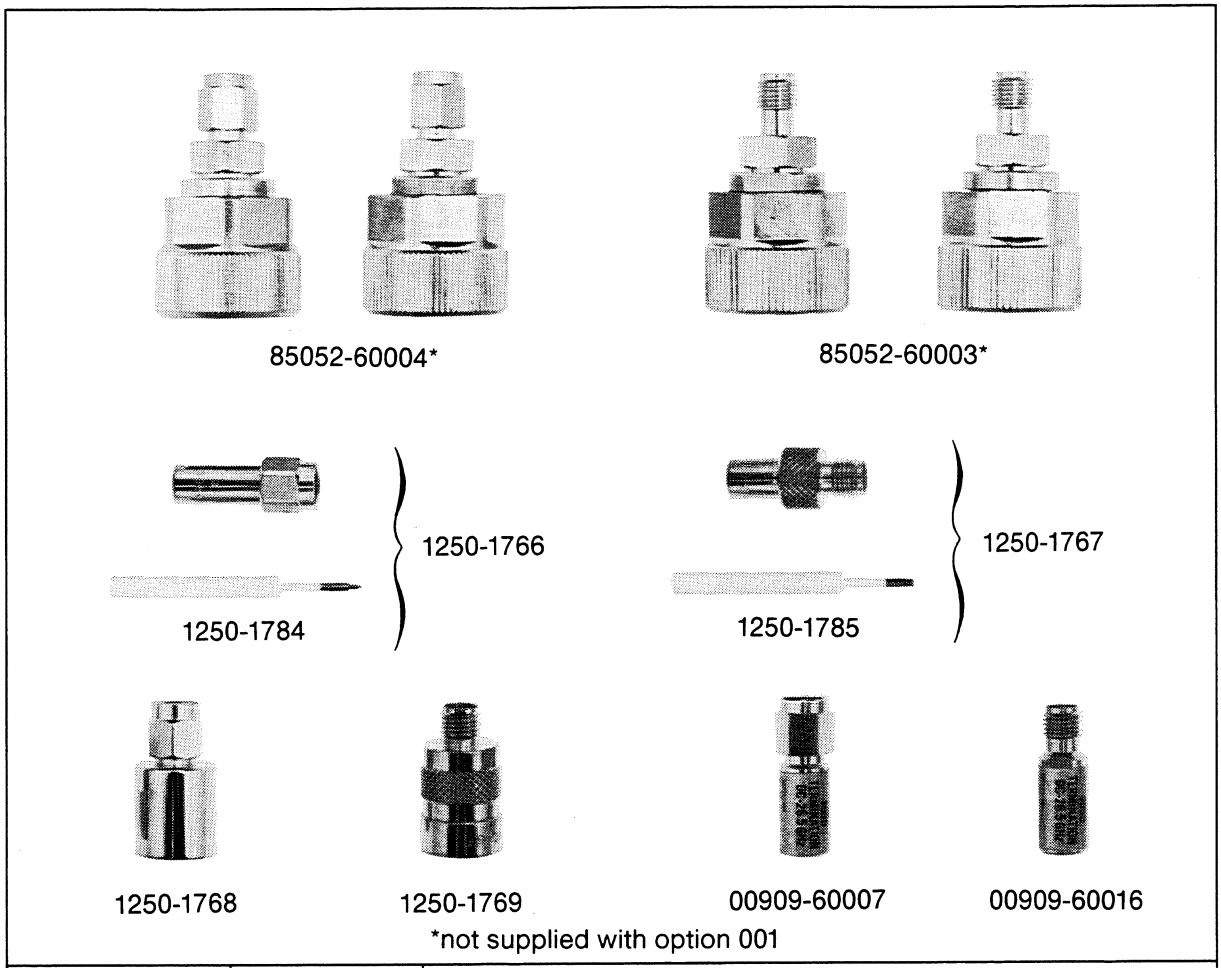
The foam-lined storage case provides protection for the calibration kit devices during shipping. If the case or devices appear to be damaged, set aside the calibration kit and all packaging materials. Contact the nearest Hewlett-Packard office (listed inside the back cover of this manual). Hewlett-Packard will arrange for repair or replacement of incomplete or damaged shipments without waiting for a settlement from the shipping company.

OPTIONS

There are two options available for the HP 85033C calibration kit.

Option 001: This option deletes the 3.5 mm to 7 mm adapters from the calibration kit.

Option 030: This option can requested only when the calibration kit is being reclalibrated at an HP Service Center. For more information on this option see "LIMITED CALIBRATION/ RECERTIFICATION" on page 2-4 of this manual.



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) 50Ω Termination and 3.5 mm (f) 50Ω Termination*	DC to 3 GHz 3 to 6 GHz 6 to 26.5 GHz	Return Loss ≥40 dB Return Loss ≥35 dB Return Loss ≥24 dB

*Typical resistance change: ±130 ppm/°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)	Center conductor recession = 0.0 to 0.003 inch
7 mm end of type-N to 7 mm adapters*	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.

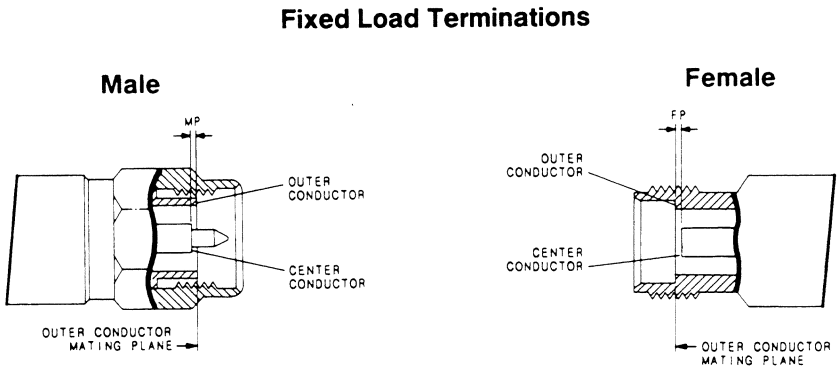


Figure 2-1. 3.5 mm Center Conductor Recession

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	Non-condensing at all times
Operation	0 to 80% (26°C maximum dry bulb temperature)
Storage	0 to 95%