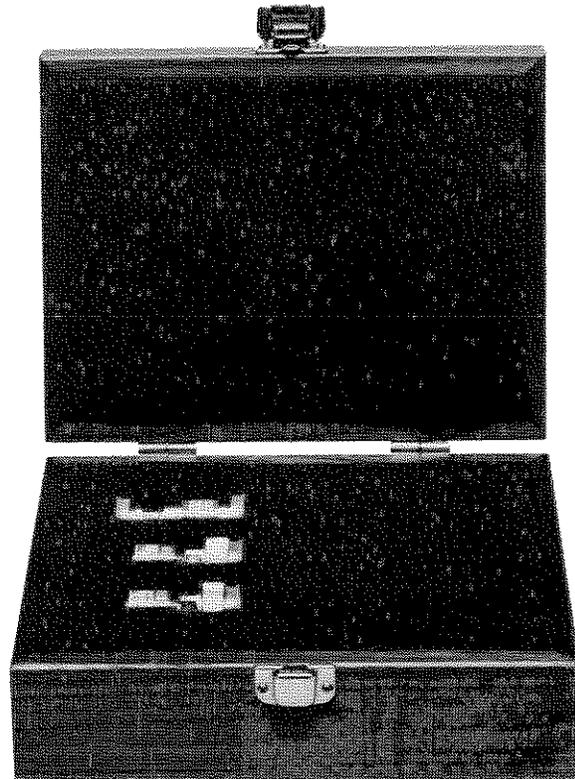


OPERATING AND SERVICE MANUAL

HP 85031B 7 mm CALIBRATION KIT



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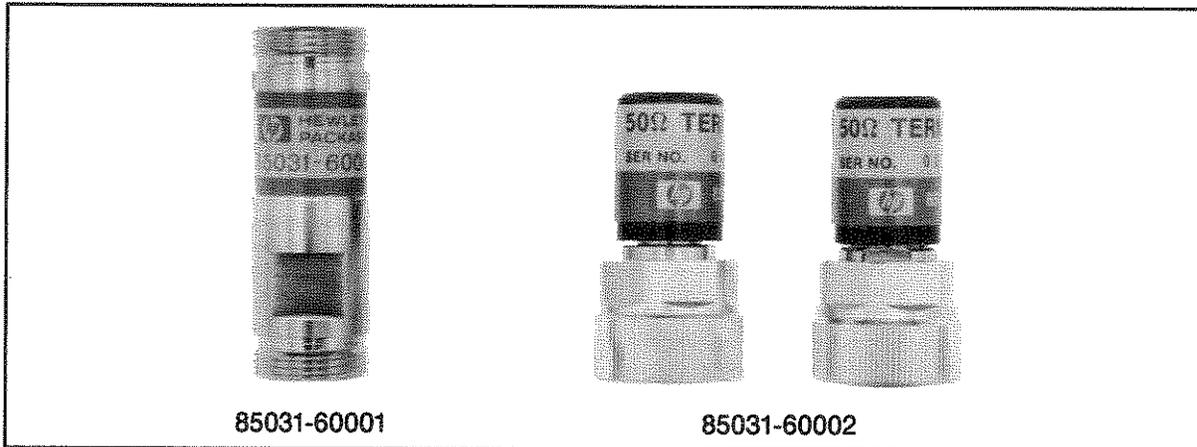
Product maintenance agreements and other customer assistance agreements are available for Hewlett-Packard Products.

For any assistance, contact your nearest Hewlett-Packard Sales and Service Office. Addresses are provided at the back of this manual.

GENERAL INFORMATION

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

- Make connections carefully to avoid misalignment and connector damage or inaccurate measurements.
- Keep the connectors free of dirt and metallic particles.
- If you must clean the connectors, try clean compressed air first. Do not use abrasives. With a plastic swab, apply **only** liquid Freon (trichlorotrifluoroethane) as a solvent.
- For more information, refer to the Microwave Connector Care manual (HP part number 08510-90064) or application note 326, Principles of Microwave Connector Care (literature number 5954-1566).
- 7mm center conductor recession with collet removed: 0.0 to 0.002 inch.
- 7mm open collet compressor recession: 0.0 to 0.001 inch.



DESCRIPTION

The HP 85031B 7 mm calibration kit, illustrated above, contains precision standard devices designed to characterize the systematic errors of 7 mm measurement systems. The storage case is supplied to protect the calibration devices from damage that will degrade performance accuracy. Replace the devices in the case immediately after use. The kit's contents and characteristics are listed below.

CONTENTS

Qty	Description (Characteristic)	HP Part or Model Number
1	7 mm 50 Ω combination open/short	85031-60001
2	7 mm 50 Ω termination (return loss \geq 52 dB, DC to 3.0 GHz)*	85031-60002
1	HP 85031B Operating and Service Manual	85031-90003
1	storage case	85031-80002
1	storage case pad	85031-80003

*at 25 \pm 5 $^{\circ}$ C; typical resistance change is \pm 130ppm/ $^{\circ}$ C

WEIGHT

Net	1.1 kg (2.4 lb)
Shipping	1.6 kg (3.5 lb)

STANDARD DEFINITIONS

STANDARD		C0 $\times 10^{-15}F$	C1 $\times 10^{-27}F/Hz$	C2 $\times 10^{-36}F/Hz$	C3 $\times 10^{-45}F/Hz$	FIXED OR SLIDING	OFFSET			FREQUENCY (GHz)		COAX or WAVEGUIDE	STANDARD LABEL
NO.	TYPE						DELAY ps	LOSS M Ω /s	Z ₀ Ω	MINIMUM	MAXIMUM		
1	SHORT						0	700	50	0	999	COAX	SHORT
2	OPEN	92.85	0	7.2	4.3		0	700	50	0	999	COAX	OPEN
3	LOAD					FIXED	0	700	50	0	999	COAX	BROAD- BAND
4	DELAY/ THRU						0	700	50	0	999	COAX	THRU
5													
6													
7													
8													

STANDARD CLASS ASSIGNMENTS

	A	B	C	D	E	F	G	STANDARD CLASS LABEL
S ₁₁ A	2							OPEN
S ₁₁ B	1							SHORT
S ₁₁ C	3							LOAD
S ₂₂ A	2							OPEN
S ₂₂ B	1							SHORT
S ₂₂ C	3							LOAD
Forward Transmission	4							THRU
Reverse Transmission	4							THRU
Forward Match	4							THRU
Reverse Match	4							THRU
Response	1	2	4					RESPONSE
Response & Isolation	1	2	4					RESPONSE & ISOL'N

The two tables on this page list the characteristics (standard definitions and standard class assignments) of the devices in this calibration kit. The information in these tables also resides in EEPROM in the HP 8753A. Use these tables with the calibration procedure described in the "Operating and Programming Reference" section of the HP 8753A manual.



For more information, call your local HP sales office listed in the telephone directory white pages. Ask for the Electronic Instruments Department. Or write to Hewlett-Packard: **U.S.A.** - P. O. Box 10301, Palo Alto, CA 94303-0690. **Europe** - P.O. Box 999, 1180 AZ Amstelveen, The Netherlands. **Canada** - 6877 Goreway Drive, Mississauga L4V 1M8, Ontario. **Japan** - Yokogawa-Hewlett-Packard Ltd., 3-29-21, Takaido-Higashi, Suginami-ku, Tokyo 168. **Elsewhere** in the world, write to Hewlett-Packard Intercontinental, 3495 Deer Creek Road, Palo Alto, CA 94304.