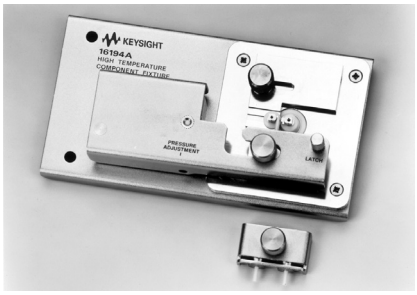
Up to 3 GHz (7 mm): SMD *continued*

16194A High temperature component test fixture



Terminal connector: 7 mm
DUT connection: 2-Terminal
Electrical length: 50 mm
Dimensions (approx.):
150 (W) x 40 (H) x 80 (D) [mm]
Weight (approx.): 350 g
Additional error:
SMD:

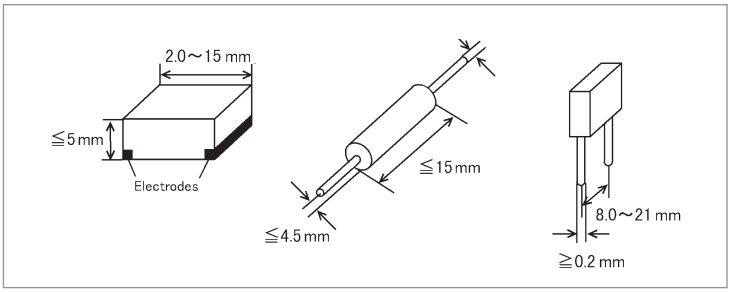
Type of error	Impedance
Proportional error	20 x f^2 [%]
Open repeatability	80 + 250 x f [μS]
Short repeatability	0.2 + 2.5 x f [Ω]

Leaded device:

Type of error	Impedance
Proportional error	20 x f^2 [%]
Open repeatability	80 + 500 x f [μS]
Short repeatability	0.4 + 12.5 x f [Ω]

f: [GHz]

Description: This test fixture is designed for measuring both axial/radial leaded devices and SMD within the temperature range from –55 to +200 °C (when used with the E4991B-007 Temperature Characteristic Test Kit, –55 to +150 °C).
Applicable instrument: E4982A, E4990A + 42942A*, E4991B, E5061B-3L3/3L4/3L5 with Opt. 005 + 16201A
* Option E4990A-120 is required
Frequency:
DC to 500 MHz (with open and short compensation)
DC to 2 GHz (with open and short and load compensation)
Maximum voltage: ±42 V peak max. (AC+DC)
Operating temperature: –55 to +200°C
DUT size: See figure below.



Furnished accessories:

Description	P/N	Qty.	Option
Wrench	8710-1181	1	Standard
Tweezers	8710-2081	1	Standard
50Ω SMD resistor	0699-2829	10	Standard
Operation and service manual	16194-90030	1	Standard
General sized			
Shorting device (1 x 1 x 2.4 (mm))	16191-29001	1	16192A-701
Shorting device (1.6 x 2.4 x 2 (mm))	16191-29002	1	16192A-701
Shorting device (2.4 x 2.4 x 3.2 (mm))	16191-29003	1	16192A-701
Shorting device (2.4 x 2.4 x 4.5 (mm))	16191-29004	1	16192A-701
EIA/EIAJ industrial standard sized			
Shorting device (1 x 0.5 x 0.5 (mm))	16191-29005	1	16192A-010
Shorting device (1.6 x 0.8 x 0.8 (mm))	16191-29006	1	16192A-010
Shorting device (2.0 x 1.2 x 0.8 (mm))	16191-29007	1	16192A-010
Shoring device (3.2 x 1.6 x 0.8 (mm))	16191-29008	1	16192A-010
Case for shorting devices	1540-0692	1	16192A-010/701

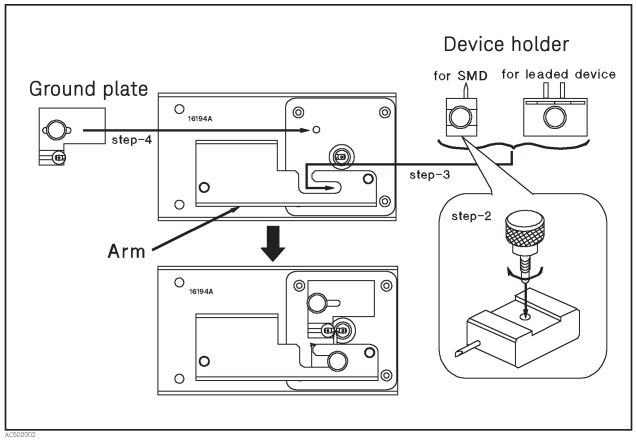
Up to 3 GHz (7 mm): SMD *continued*

16194A High temperature component test fixture *continued*

Options:
16194A-010: Add EIA/EIAJ industrial standard sizedshorting bar set
16194A-701: Add general sized shorting bar set

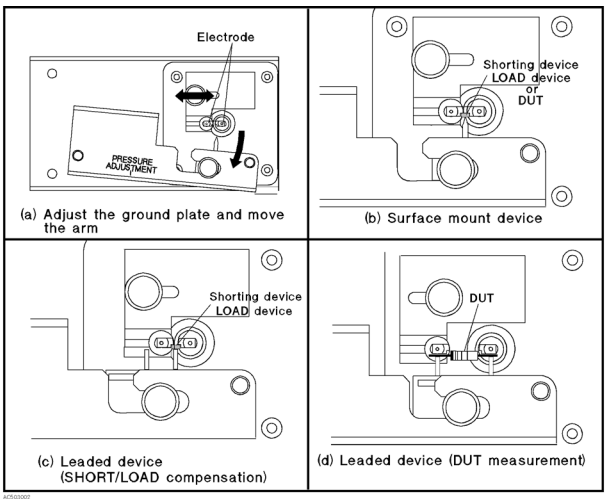
Compensation and measurement: Before beginning the measurement, the appropriate device holder (for a SMD or lead component) must be prepared with the text fixture. The following figure shows how the device holder is exchanged to match the device type. The next step is to perform open and short compensations in combination with the electrical length compensation. When measuring above 500 MHz, load compensation

1. Remove the ground plate
2. When measuring SMD, attach the knob on the device holder.
3. Select the device holder suitable for the device type. Loosen its knob and insert into the arm.
4. Set the ground plate.



Exchanging the device holder

is also recommended. The fixture's electrical length must be entered into the electrical length compensation function of the measurement instrument first. Then open compensation is performed by separating the high and the low electrodes from each other. The separation should be equivalent in size to the DUT's width. Short compensation is performed by using the option 16194A-010/701 shorting bar set. Load compensation is performed by using the furnished 50 Ω SMD chip resistor. After performing open, short, and load compensations in combination with the electrical length compensation, the DUT is inserted into the test fixture. The following figures show how measurement is performed.



Placing the device