

Table 1-1. Specifications (1 of 2)

41951A Specifications

Usable Frequency Range:	100 kHz to 500 MHz
DC Bias Range:	± 40 V, ± 0.5 A
UNKNOWN Port:	APC-7 Connector
Weight:	Approx. 2.7 kg Approx. 0.55 kg (Test Adapter only)
Operation Environment:	0°C to 55°C $\leq 95\%$ RH at 40°C
Storage Environment:	-40°C to 70°C

The following specifications apply to the 4195A when used with the 41951A.

Measurement Parameter:	$ Z $, $ Y $, θ , R, X, G, B, L, C, D, $Q(=1/D)$
Test Frequency Range:	100 kHz to 500 MHz
Signal Level at DUT (nominal):	-62 dBm to +3 dBm at 50 Ω load
	Note: Signal level (at DUT) is 12 dB lower than 4195A output level.
Output Impedance:	Nominal 50 Ω
DC Bias (supplied from 4195A):	
Voltage Range	-40 V to 40 V
Resolution	10 mV
Accuracy	$\pm(0.12\%+12 \text{ mV })$ at 23°C $\pm 5^\circ\text{C}$
Maximum Current	± 20 mA

Table 1-3. Specifications (2 of 2)

Measurement Range and Highest Resolution:

Parameter	Range	Resolution
Z , R, X	30 m Ω to 30 k Ω	10 m Ω
Y , G, B	30 μ S to 30 S	10 μ S
θ	-180° to 180°	0.01°
L	10 pH to 30 mH	10 pH
C	10 fF to 30 μ F	10 fF
D	0.001 to 10	0.0001
Q	0.1 to 1000	0.01

Measurement Accuracy (Supplemental Performance Characteristics):

Measurement accuracy is specified at the connecting surface of the APC-7 connector, under the following conditions.

- 1) Warm up Time: >30 minutes
- 2) Ambient Temperature: 23°C \pm 5°C
at the same temperature at which Calibration was performed
- 3) Output Signal Level: 15 dB greater than the Input Range of reference port (the value indicated by ' RANGE R=' on the 4195A's display)
- 4) Signal Level at DUT: -20 to +3 dBm
- 5) Correction: ON

Figure 1-3 shows the impedance measurement accuracy of HP 4195A when used with the 41951A.