

FIGURE 2: PHASE ACCURACY WHEN MAKING GAIN MEASUREMENTS

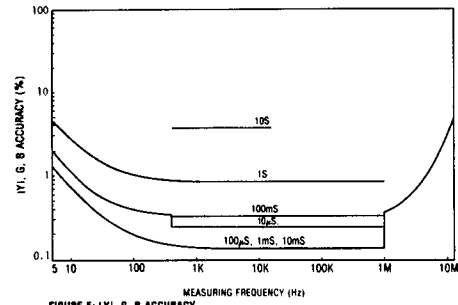


FIGURE 5: |Y|, G, B ACCURACY

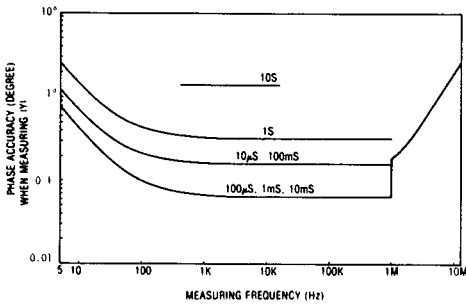


FIGURE 6: PHASE ACCURACY WHEN MEASURING |Y|

Impedance Measurement

Parameter measured: $|Z| - \theta$, $|Y| - \theta$, R-X, G-B, L-D • Q • R • G, C-D • Q • R • G and deviation (Δ , $\Delta\%$) of all parameters

Display: 4½ digits, max. display 12999 counts, 19999 for L & C.

Circuit mode: series equivalent circuit (—□—) and parallel equivalent circuit (—□—). Automatic selection available.

Auto ZERO adjustment: automatic normalization of the readout offset due to residuals of the test fixture by pushbutton operation (at spot frequency)

Measuring range and accuracy (23 ± 5°C): specified at BNC unknown terminals after 30 minute warmup when OSC level is more than 0.1 V and when auto ZERO adjust is performed (test speed: normal or average). Accuracy given below is only valid when the measured value is equal to full scale of each range.

|Z| - θ , R - X measurement: range: $|Z|$, R, X: 0.1 m Ω to 1.2999 M Ω ; θ : -180.00° to +180.00°. Accuracy: R accuracy (D ≥ 10); X accuracy (D < 1)

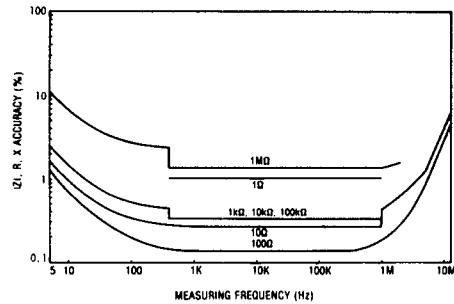


FIGURE 3: |Z|, R, X ACCURACY

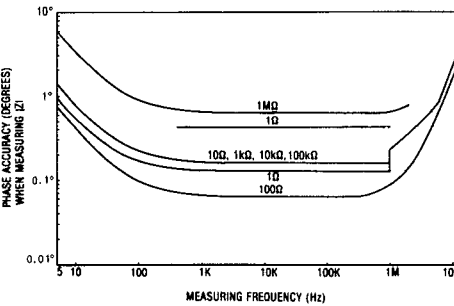


FIGURE 4: PHASE ACCURACY WHEN MEASURING |Z|

L - D • Q, C - D • Q measurement: (automatically calculated from measured Z/Y values)

Parameter	Measuring Range*	Basic Accuracy
L	0.01 nH to 1000 H	0.27%
C	0.1fF to 199** mF	0.15%
D(1/Q)	0.0001 to 19.999	0.001 (C-measurement) 0.003 (L-measurement)

*Varies with measuring frequency except for D(1/Q)
**Accuracy of C ranges over 100 mF is not specified.

Internal dc bias: standard (impedance measurement only)

Voltage range: -35 V to +35 V, 10 mV step

Setting accuracy (23 ± 5°C): 0.5% of setting +5 mV

Bias control: spot and swept, using front panel controls or HP-IB

General

Measuring Time (high speed mode)

B-A and θ , A or B: 88 to 127 ms (≥ 400 Hz)

Impedance parameters: 58 to 91 ms (≥ 1 kHz)

Test Level Monitor Range (impedance measurement)

Voltage: 5 mV to 1.1 V

Current: 1 μ A to 11 mA

Operating temperature: 0 to 55°C, ≤ 95% RH at 40°C

Power: 100, 120, 220 V ±10%, 240 V + 5% to -10%, 48 to 66 Hz, 150 VA max.

Size: 425.5 mm W x 235 mm H x 615 mm D (16.75" x 9" x 22.6").

Weight: approx. 19 kg (41.9 lb)

Furnished accessories and parts: HP 16047A test fixture, HP 11048C 50 Ω feed thru terminations (2 ea.), power splitter, HP 11170A BNC cables (2 ea.), BNC adapter

Accessories available

HP 16095A Probe Fixture	\$715
HP 16096A 2-port Component Test Fixture	\$1275
HP 16097A Accessory Kit	\$1,850
HP 16047C Test Fixture	\$305
HP 16048A Test Leads (BNC connector)	\$325
HP 16048C Test Leads with alligator clip	\$420

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HP 4192A LF Impedance Analyzer

\$14,200

Fast-Ship product -- see page 758.

|Y| - θ , G - B measurement: range: $|Y|$, G, B: 1 nS to 12.999 S; θ : -180.00° to +180.00°. Accuracy: G accuracy (D > 1); B accuracy (D ≤ 0.1).