

## Competitive Comparison

# Keysight E4980AL Precision LCR Meter versus HAMEG HM8118 LCR Meter

### Keysight E4980AL



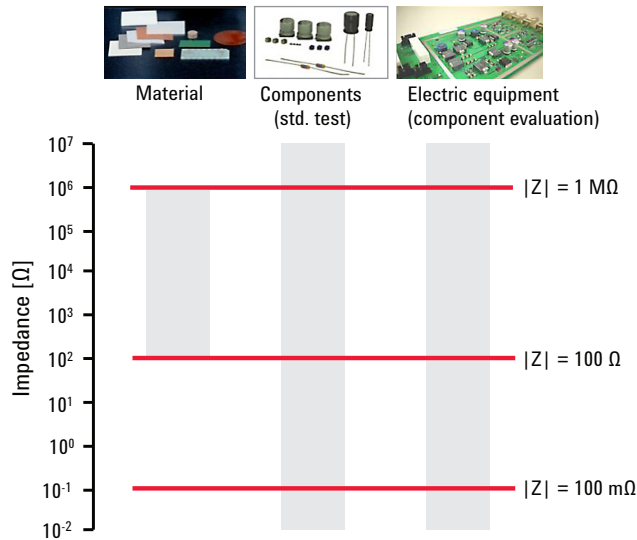
- Combination of accuracy, speed and versatility
- Wide variety of accessories
- Upgradability



	Keysight E4980AL		HM8118	
Frequency range	20 Hz to 300 kHz (Option 032)	✓	20 Hz to 200 kHz	✗
Test signal level	2 Vrms	✓	1.5 Vrms	✗
Test signal level monitor	Yes	✓	Yes	✓
ALC	Yes	✓	Yes	✓
Basic accuracy (freq. range)	0.05% (100 Hz to 300 kHz)	✓	0.05% (20 Hz to 1 kHz)	✗
Measurement speed for basic accuracy	119 msec (med. at 300 kHz)	✓	125 msec (med. at 1 kHz)	✗
Measurement accuracy for high/med/high/med/low Impedance	See next page	✓	See next page	✗
DC bias signal level	1.5 V, 2 V	✗	0 to 5 V	✓
DCR measurement	Yes	✓	No	✗
Compensation	Open/Short/Load	✓	Open/Short/Load	✓
Cable length correction	1/2/4 m	✓	No	✗
List sweep	Test frequency, test signal voltage/current (201 points)	✓	No	✗
Comparator BIN sort	Yes	✓	Yes	✓
USB/LAN interface	Yes	✓	No	✗
Test accessory	Over 20 kinds	✓	6 kinds	✗
Frequency upgrade	Yes (500 kHz/1 MHz)	✓	No	✗

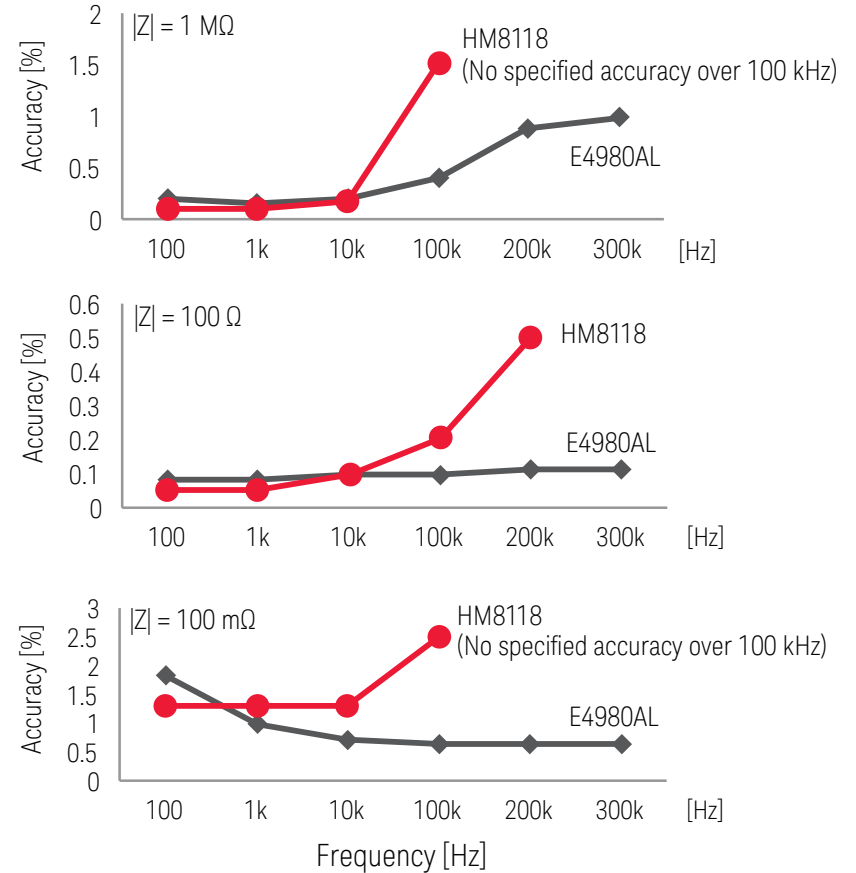
Sources: E4980A/E4980AL Data Sheet (Published in December 2014, 5989-4435EN)  
 HM8118 Data Sheet (Last updated Jun 22,2012, Reg.-No. 071040 QM08)

## Typical Impedance Range by DUT Category



For basic testing or evaluation of electronic components such as capacitors and materials, wide impedance measurement range and test frequency range are required. For example, the high-value capacitance is measured at 120 Hz, and the low-value capacitance is measured at 1 MHz.  
 e.g. 10 mF capacitor:  $|Z| = 133 \text{ m}\Omega$  at 120 Hz  
 1 pF capacitor:  $|Z| = 159 \text{ k}\Omega$  at 1 MHz

## Impedance Measurement Accuracy over Test Frequency



Sources: E4980A/E4980AL Data Sheet 5989-4435EN, HM8118 Data Sheet Reg.-No. 071040 QM08

**Measurement condition:**

Test signal level: 1Vrms, cable length: 0 m, measurement speed: E4980AL med., HM8118 slow

[www.keysight.com/find/E4980AL](http://www.keysight.com/find/E4980AL)