

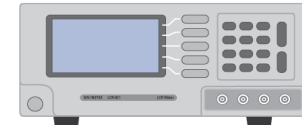
## Competitive Comparison

# Keysight E4980AL Precision LCR Meter versus GW LCR-821 LCR Meter

### Keysight E4980AL



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

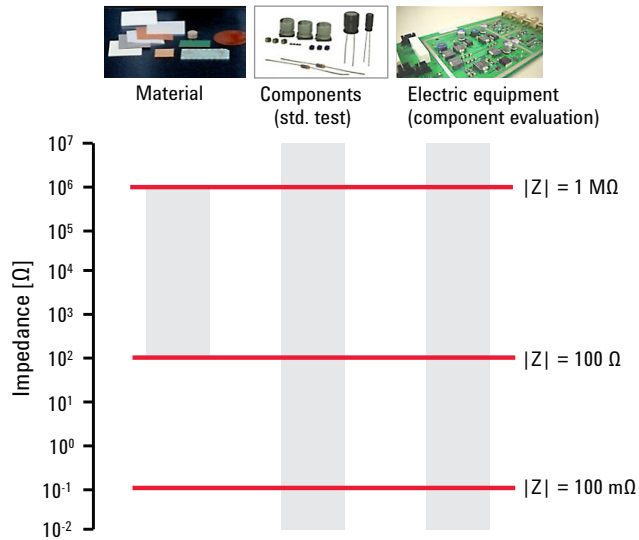


	Keysight E4980AL		GW LCR-821	
Frequency range	20 Hz to 300 kHz (Option 032)	-	12 Hz to 200 KHz	-
Test signal level	2 Vrms	✓	1.275 Vrms	✗
Test signal level monitor	Yes	✓	No	✗
ALC	Yes	✓	Yes (voltage only)	✗
Basic accuracy (freq. range)	0.05% (100 Hz to 300 kHz)	✓	0.05% (1 kHz)	✗
Measurement speed for basic accuracy	119 msec (med. at 300 kHz)	✓	896 msec (slow 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	✓	2 V	✗
DCR measurement	Yes	✓	No	✗
Compensation	Open/Short/Load	✓	Open/Short	✗
Cable length correction	1/2/4 m	✓	No	✗
List sweep	Test frequency, test signal voltage/current (201 points)	✓	Test frequency, test signal voltage (AC or DC) (30 points)	✗
Comparator BIN sort	Yes	✓	Yes	✓
USB/LAN interface	Yes	✓	No	✗
Handler interface	Yes (Option 201)	✓	No	✗
Scanner interface	Yes (Option 301)	✓	No	✗
Test accessory	Over 20 kinds	✓	7 kinds	✗
Frequency upgrade	Yes (500 kHz/1 MHz)	✓	No	✗

Sources: E4980A/E4980AL Data Sheet (Published in December 2014, 5989-4435EN)

LCR-8000G Series User Manual (Published in Jan. 2012, GW INSTRUMENT PART NO. 82CR-81900MK1)

## Typical Impedance Range by DUT Category

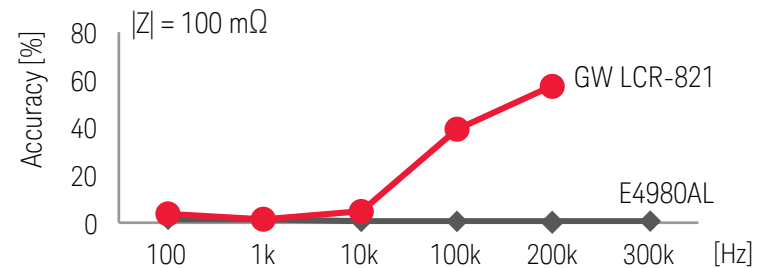
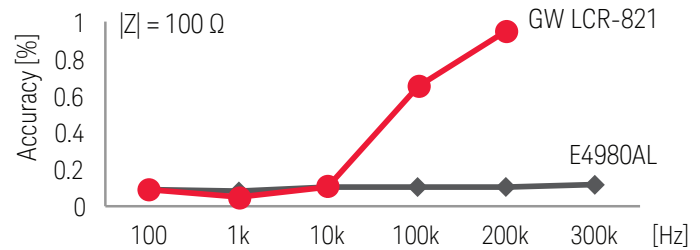
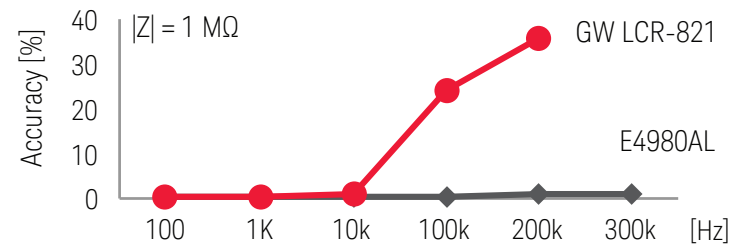


For basic testing or evaluation of electronic components such as capacitors and materials, wide impedance measurement range and test frequency range are required. For example, the high-value capacitance is measured at 120 Hz, and the low-value capacitance is measured at 1 MHz.

e.g. 10 mF capacitor:  $|Z| = 133 \text{ m}\Omega$  at 120 Hz  
 1 pF capacitor:  $|Z| = 159 \text{ k}\Omega$  at 1 MHz

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

## Impedance Measurement Accuracy over Test Frequency



Sources: E4980A/E4980AL Data Sheet 5989-4435EN, LCR-800 Series User Manual 82CR-81900MK1

**Measurement condition:**

Test signal level: 1Vrms, cable length: 0 m, measurement speed: E4980AL med., LCR-821 slow