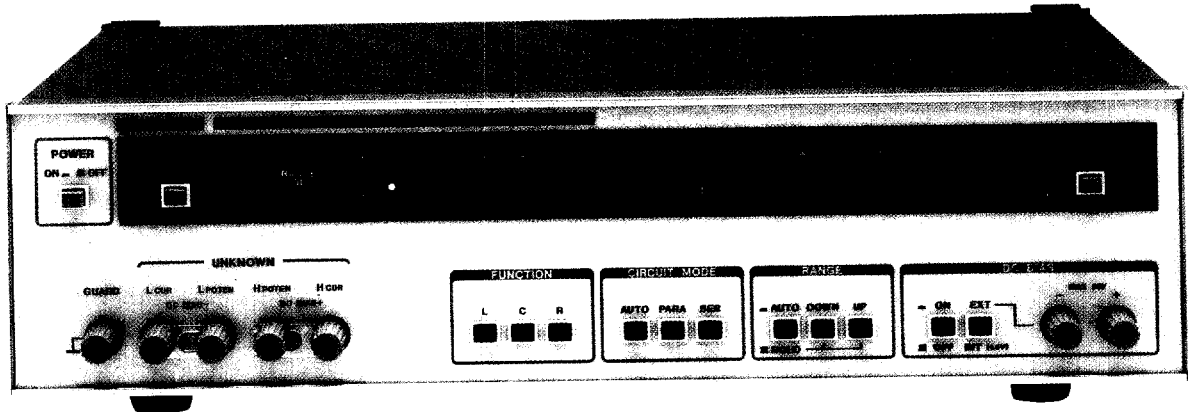


Digital LCR Meter

- GPIB Available for Fully Automatic Testing
- Offset Function Cancels Fixture Resistance, Inductance and Capacitance
- External Bias Provision



LCR-745 (G)

The LCR-745 is a CPU controlled digital LCR meter with automatic and manual ranging. Direct resistance, capacitance and inductance measurements of components or equivalent series and parallel circuits can be made with Quality (Q) and Dissipation factor (D) displayed simultaneously with inductance and capacitance. The unit's wide automatic measurement range greatly reduces the time associated with performing these component measurements compared with a manual LCR bridge. This makes the

LCR-745 an ideal instrument for incoming inspection or final production test of components where ease of operation and high throughput are necessary.

An offset function is available which can be used to cancel any residual resistance, capacitance or inductance of the test leads or fixtures being used. In addition, the offset function can be used to normalize the value of a component under test to zero. The deviation (including polarity) from this normalized value of succeeding

components will be displayed simplifying testing.

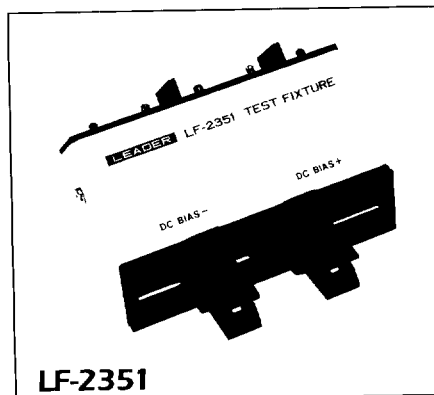
Two test frequencies, 120 Hz and 1 kHz are available, facilitating the testing of electrolytic capacitors. In addition, an external dc bias in the range of 0 to +30 V can be applied; an internal bias of +1.5 V is available. Basic measurement accuracy is $\pm 0.35\%$. Also, existing LCR-745 units may be converted to the GPIB model. Consult the factory for details.

Test Fixtures (Optional)



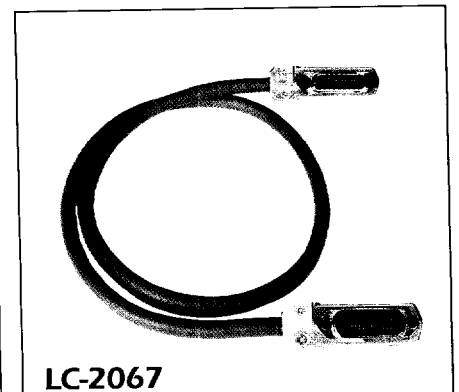
LF-2350

The LF-2350 test fixture has a 1 meter long test cable terminated in gold plated Kelvin clips for component testing. It facilitates the testing of components with large terminals such as electrolytic capacitors. A guard clip is provided.



LF-2351

The LF-2351 test fixture has low insertion force connectors for the rapid testing of both axial and radial lead components without having to bend the leads. This makes it ideal for incoming inspection use.



LC-2067

LC-2067 1 meter GPIB Cable
LC-2068 2 meter GPIB Cable

Specifications

LCR-745G Digital LCR Meter

Measured Parameters

Resistance
Capacitance/Dissipation Factor
Inductance/Quality Factor

RESOLUTION

Inductance

1 kHz: 0.1 μ H - 199.9 H in 7 ranges,
3 $\frac{1}{2}$ digits
120 Hz: 0.001 mH - 199.9 H in 6
ranges, 3 $\frac{1}{2}$ digits

Capacitance

1 kHz: 0.1 pF - 1999 μ F in 8 ranges,
3 $\frac{1}{2}$ digits
120 Hz: 1 pF - 1999 μ F in 7 ranges,
3 $\frac{1}{2}$ digits

Resistance

0.001 Ω - 19.99 M Ω in 8 ranges,
3 $\frac{1}{2}$ digits
Dissipation
0.001 - 1.999 in 8 ranges,
3 $\frac{1}{2}$ digits

Quality

0.5 - 99.9 in 8 ranges
3 digits

GENERAL

Measurement Method

2, 4 or 5 terminal

Measurement Mode

Auto, series or parallel

Ranging

Auto or manual with over and under
range indication

Test Frequencies

1 kHz and 120 Hz

Test Conditions

Parallel measurement: 1 V rms
Series measurement: Constant current

DC Bias (Capacitance Measurements)

Internal: +1.5 V
External: 0 to +30 V

Deviation Measurement

Indicates (measured value-reference
value) \pm 1 count

Measurement Time

Auto-ranging
< 0.2 s - 2 s maximum

Manual Ranging

Maximum time within correct range.
See chart.

Parameter(s)	Test Frequency	
	120 Hz	1 kHz
RLC	0.4 s	0.25 s
L and Q C and D	0.6 s	0.4 s

POWER REQUIREMENTS

100, 120, 220, 240 V ac \pm 10%
50/60 Hz, 26 VA

PHYSICAL

Size (W x H x D)

15 $\frac{3}{4}$ x 4 x 11 $\frac{7}{8}$ in.
400 x 100 x 300 mm

Weight

12 lbs., 5.5 kg

LDC-822 80-MHz Frequency/ Period Counter

FREQUENCY MEASUREMENTS

Range

10 Hz - 80 MHz

Gate Time

0.1, 1, 10 s

Resolution

GATE TIME	DISPLAY	RESOLUTION
0.1 s	0.00001 MHz - 80.00000 MHz (10 Hz - 80 MHz)	10 Hz
1 s	0.010 kHz - 9999.999 kHz (10 Hz - 10 MHz)	1 Hz
10 s	0.0100 kHz - 999.9999 kHz (10 Hz - 1 MHz)	0.1 Hz

Accuracy

\pm 1 count
 \pm time base accuracy

PERIOD MEASUREMENT

Range

100 ms to 1 μ s

Multiplication Factors

Times 10, 100 and 1,000

Resolution

10, 1, 0.1 μ s

Accuracy

\pm 1 count
 \pm time base accuracy
 \pm trigger error

INPUT SECTION

Sensitivity

20 mV rms

Attenuator

Times 1, 10 and 100

Coupling

ac

Impedance

1 M Ω nominal

Maximum Input Voltage

100 V rms at 10 to 400 Hz into 1 M Ω
20 V rms at 400 Hz to 100 kHz into 1 M Ω
5 V rms at 100 kHz to 80 MHz into 50 Ω

TIME BASE

Frequency

10 MHz

Accuracy

5 ppm (0 - 40°C)

Aging Rate

5 ppm/yr.

GENERAL

Display

7 digits, 0.5" fluorescent with overflow,
gate and zero blanking

Operating Temperature

0 - 40°C (32 - 104°F)

POWER REQUIREMENTS

100, 120, 220, 240 V ac \pm 10%
50/60 Hz, 10 VA

PHYSICAL

Size (W x H x D)

8 x 3 x 10 in., 203 x 76 x 254 mm

Weight

5 lbs., 2.3 kg

SUPPLIED ACCESSORY

BNC to Alligator Cable