



1689/1689M Digibridge® RLC Testers

Get the Speed, Versatility and Accuracy You Need for Production Passive Component Testing.

The GenRad 1689 Digibridge Precision RLC Tester gives you the best price and best performance for your most demanding applications whether they be production test, incoming inspection, component design and evaluation, process monitoring or dielectric measurement. It is a versatile, full function microprocessor-based passive component tester that's available in either bench top (1689) or rack mountable, high speed (1689M) models.

The GenRad 1689 is a sophisticated, microprocessor-controlled tester that brings new levels of flexibility, simplicity and accuracy to RLC measurement. It's high performance automated test with a range of programmable test frequencies and test voltages, as well as automatic limit comparison, automatic parameter selection, remote programmability, automatic binning, and automatic zeroing.

The GenRad 1689/1689M provide a powerful combination of features designed to maximize productivity in all testing environments.

- 0.02% Accuracy for RLC measurements.
- 0.0001 for D and Q measurements.
- Programmable test frequencies from 12 Hz to 100 kHz for maximum testing versatility.
- Programmable test voltages from 5mV to 1.275V permits testing at exact manufacturer-specified voltage levels.
- Full range keyboard-selectable test speeds: 1689-Variable up to 30 measurements per second with high speed option; 1689M-Variable up to 50 measurements per second with high speed option, complements automatic handling equipment to maximize throughput.
- Two selectable measurement modes: Continuous and Triggered with Averaging available in each ensures measurement flexibility
- Optional IEEE-488 Bus and Handler Interface enable remote programming and allow the addition of a component handler to optimize throughput.
- Wide choice of measurement parameters allow you to work with familiar units.
- A full, five-digit LED display for RLC measurements and a four-digit readout for D and Q testing, simultaneously display both test results for each measurement, automatically.
- Guarded Kelvin measurement techniques protect measurement integrity.
- Automatic limit comparison and binning ensure fast, mistake-proof sorting of components.
- Automatic Self-test and diagnostic check maintain reliable, error-free operation.
- Automatic limit comparison and binning ensure fast, accurate sorting of components.
- Automatic Binning Summary capability simplify reporting of measurement results.

GenRad Quality Keeps Your Testing Productivity High, While Keeping Your Costs Low

Our reputation for quality is based on total commitment to fulfilling your testing needs. It's based on a test instrument that responds to our customers' needs in the most cost-effective manner possible . . . a test instrument that has been carefully designed and built to exacting standards . . . a test instrument that's backed by comprehensive before and after sales support. The result is a family of quality test instruments built tough to stand up to the abuse of incoming inspection and production environments, while delivering top performance and accuracy during a long in-service life.

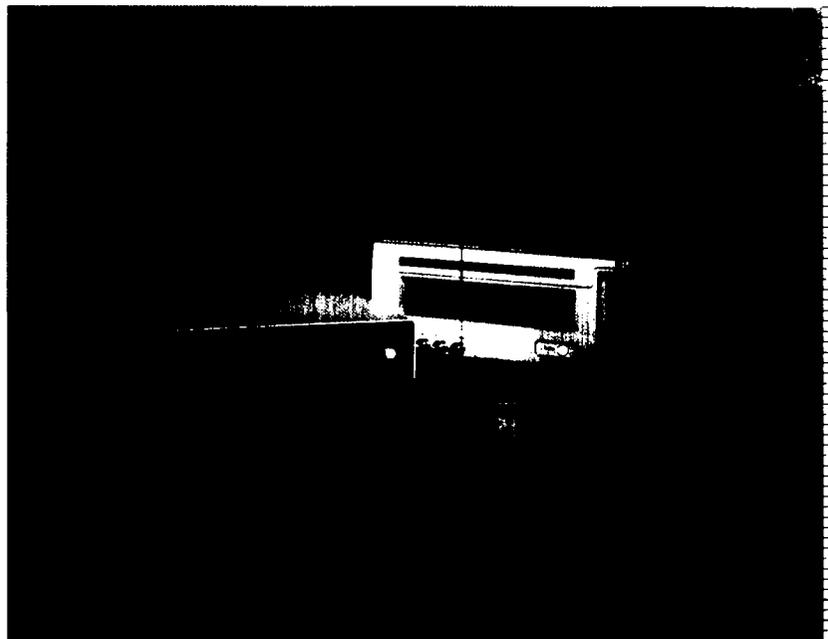
The Tradition of Leadership Continues . . . The GenRad Digibridge Family

GenRad established its leadership in passive component testing more than fifty years ago with the introduction of the first commercial bridges. The GenRad Digibridge Family continues that long tradition as the price/performance leader in the passive component testing market.

Learn more about GenRad's 1689 and 1689M Digibridge RLC Passive Component Testers and how they can increase your productivity. For all the right answers to your passive component testing needs, call the knowledgeable Digibridge experts.

In the U.S., our toll-free telephone (1-800-772-2220) gives you instant access to complete Digibridge information; in MA, 508-369-4400 Ext. 3129.

Outside the U.S., contact your nearest GenRad office.



Specifications

Measurement Parameters	• C/D, L/Q, R/Q or C/R (series or parallel)		
Test Frequencies	• Over 500 programmable test frequencies (12 Hz to 100 kHz)		
Applied Voltage	• 5mV to 1.275V (programmable in 5mV steps)		
Measurement Speed	• Up to 30 measurements/second with High Speed Option (1689) • Up to 50 measurements/second with High Speed Option (1689M)		
Measure Mode	• Continuous or Triggered with Averaging up to 256 measurements		
Display Format	• Dual Display • 5 full digit LED for RLC • 4 full digit LED for QDR • Automatically positioned decimal points	• Bin Number, Delta RLC, Delta % • Individual LED indicators for units and measurement conditions	
Bias	• Internal 2.0Vdc	• External up to 60Vdc	
Automatic Functions	• Auto ranging with manual hold	• Auto parameter (RLC) with manual selection	
Binning	• Thirteen pass bins for RLC	• Two fail bins, RLC and QDR	
Interfaces	• IEEE 488/Handler Interface option • High Speed Measurement/IEEE 488/Handler Interface option		
Ranges	Parameter	Direct Reading Range	Extended Range Ratio and DQ in PPM
	R	00001 ohm to 99999 kohm	00010 μ ohm to 9999.9 Gohm
	L	00001 mH to 99999 H	00010 nH to 9999.9 MH
	C	00001 pF to 99999 μ F	00010 aF to 9999.9 F
	R with C	0001 ohm to 9999 kohm	not extended
	D with C	0001 to 9999	1 to 9999 ppm
	Q with R or L	0001 to 9999	1 to 9999 ppm
Accuracy	• Basic RLC \pm 0.2%	• Basic DQ \pm 0.001	
Zeroing	• Open and short circuit compensation		
Other Features	• Charged Capacitor Protection • Keyboard Lock • Constant Voltage Mode • Programmable Delay	• DQ in PPM • Bin Count Summary • Programmable Integration Time • Median Value Mode	
Temperature Range	• Operating 0 to 50°C, less than 85% RH	• Storage 40 to 75°C	
Power Requirements	• 90 to 125V or 180 to 250Vac • 50 to 60 Hz	• 60 watts maximum	
Accessories Supplied	• Power Cable • Axial Lead Adaptors (1689 only) • Bias Cable	• Instruction Manual • Test Fixture (built-in) (1689 only) • 1689-9602 BNC to BNC Extender Cable with Banana/Alligator Clips	
Accessories Available	• 1689-9620 High Speed IEEE/Handler Interface • 1658-9620 IEEE/Handler Interface • 1689-9601 BNC Adaptor • 1689-9602 BNC to BNC Extender Cable • 1689-9603 Chip Component Tweezers • 1657-9600 Banana/Alligator Clip Extender Cable	• 1688-9600 874 Connector Extender Cable • 1689-9606 Kelvin Clip Extender Cable • 1689-9600 Remote Test Fixture • 1689-9605 GO/NO GO Remote Test Fixture • 1689-9604 Calibration Kit • 1689-9611 Rack Kit	



For more information or for the location of your nearest GenRad sales office, contact:

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