

Digibridge

Series 1693 RLC Tester

Top-of-the-Line Passive Component Testing

USES:

- Meters used for impedance measurements (inductance, capacitance, and resistance) to characterize the performance of a variety of electrical components and materials.
- Test Resistors, Capacitors, Inductors or any type of passive component
- Testing Electronic Components

FEATURES:

- 0.02% Accuracy for RLC, G, Z and Y
- 0.0001 Accuracy for DQ measurements.
- Wide range of measurement parameters
- IEEE-488 Bus and Component Handler Option
- Programmable test frequencies from 12Hz to 200kHz for maximum testing versatility.
- A full, five-digit LED display for RLC ; four-digit readout for D and Q

Introduction

The QuadTech 1693 Digibridge RLC Tester gives you the best combination of features to meet your most demanding testing requirements. It's a versatile, flexible instrument that replaces guesswork with a full range of programmable test frequencies, speeds, and voltages. An enhanced display facilitates visual acquisition of test data and eliminates costly errors. It's your best bet for the best price and best performance for your production test, incoming inspection, component design and evaluation, process monitoring or dielectric measurement applications.

Description

The 1693 is a sophisticated, microprocessor controlled tester that brings new levels of flexibility, simplicity and accuracy to RLC measurement. It's testing automation at its best 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 1693 provides a powerful combination of features designed to maximize productivity in all testing environments.

- 0.02% Accuracy for RLC measurements and 0.0001 Accuracy for DQ measurements.
- Programmable test frequencies from 12Hz to 200kHz 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: 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 Binning Summary capability simplifies reporting of measurement results.



For more detailed specifications, visit www.quadtech.com

For more information about special purchase, rent & lease options, call

1-800-253-1230

Fax 1-978-461-4295

Intl. 1-978-461-2100



1693 Digibridge RLC Features

Measurement Parameters:	R/Q, L/Q, C/R, C/D (series or parallel), R/X (series), G/B (parallel), Z/Angle or Y/Angle	
Test Frequencies:	Over 500 programmable test frequencies (12Hz to 200kHz) 0.01% Accuracy.	
Applied Voltage:	5mV to 1.275V (programmable in 5mV steps).	
Measurement Speed:	Up to 50 measurements/second with High Speed Option.	
Measurement Mode:	Continuous or Triggered with averaging up to 256 measurements.	
Display Format:	Dual Display featuring 5 full digit LED for RLCGZY and 4 full digit LED for DQRXB or Angle Bin Number, Delta RLC, Delta %, Value Automatically positioned decimal points and minus signs where appropriate. Individual LED indicators for parameters, units, and measurement conditions.	
Bias:	Internal 2.0V DC	External up to 60V DC
Automatic Functions:	Auto ranging with manual hold	Auto parameter (RLC) with manual selection
Binning:	Thirteen pass bins for RLCGZY	Two fail bins, RLCGZY and DQRXB or Angle
Interfaces:	IEEE-488/Handler Interface option, High speed Measurement/IEEE-488/Handler Interface option	
Ranges:		
	Parameter	Direct Reading Range
	R and [Z]	0.00001Ω to 99999kΩ
	L	0.00001mH to 99999H
	C	0.00001pF to 99999μF
	G and [Y]	0.00001μS to 99999S
	R with C	0.0001Ω to 9999kΩ
	X with R	0.0001Ω to 9999kΩ
	B with G	0.0001μS to 9999S
	D with C	0.0001 to 9999
	Q with R or L	0.0001 to 9999
	Angle	±0.0001 to 180 degrees
		Extended Ranges
		Ratio and DQ in PPM
		0.00010Ω to 9999.9GΩ
		0.00010nH to 9999.9MH
		0.00010aF to 9999.9F
		0.00010pS to 9999.9MS
		not extended
		not extended
		not extended
		1 to 9999ppm
		1 to 9999ppm
		±1 to 999 microdegrees
Accuracy:	(Primary parameter)	Basic RLCGZY ±0.02%.
	(Secondary parameter)	Basic QD ±0.0002 ±0.0001 in PPM mode. Basic RXB ±0.02%. Angle ±0.01°.
Zeroing:	Open and short circuit compensation.	
General Features:	<ul style="list-style-type: none"> • Charged Capacitor Protection (1 Joule) • Keyboard Lock (Store Test Conditions) • Constant Voltage Mode (25Ω source) • Programmed Delay (1 to 99999ms) 	<ul style="list-style-type: none"> • DQ in PPM • Bin Count Summary • Programmed Integration Time • Median Value
Dimensions:	(w x h x d): 17.25 x 5.625 x 15.160in (438.15 x 142.87 x 385.2mm)	
Weight:	14 lbs. (6.4kg) net, 19 lbs. (8.6 kg) shipping.	
Accessories Supplied:	<ul style="list-style-type: none"> • Power Cable • Bias Cable 	<ul style="list-style-type: none"> • 1689-9602 BNC to BNC Extender Cable with Banana/Alligator Clips • Instruction Manual
Environmental:	Operating: 0°C to +50°C Storage: -45°C to +75°C Humidity: <85%	
Power:	<ul style="list-style-type: none"> • 90-250V AC • 50 - 60 Hz 	<ul style="list-style-type: none"> • 60W max

Ordering Information

1693-9700	1693 RLC Tester	1658-9620	IEEE/Handler Interface
Includes:		1689-9600	Remote Test Fixture
4200-0300	Power Cable	7000-05	Chip Component Tweezers
1689-9602	BNC to BNC Extender Cable with Banana/Alligator Clips.	1689-9605	GO/NO GO Remote Test Fixture
1693-0120	Instruction Manual	1689-9604	Calibration Kit
No P/N	Calibration Certificate traceable to NIST	7000-03	Kelvin Clip Extender Cable
		1689-9611	Rack Kit
Optional Accessories:			
1689-9630	High Speed IEEE/Handler Interface		
1657-9600	Banana/Alligator Clip Extender Cable		

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