

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

GENRAD

GenRad 1644-A Megohm Bridge

The GenRad 1644-A is a standard for precise impedance measurements. This instrument is known for its accuracy and reliability in measuring capacitance, inductance, resistance, and dissipation factor. Ideal for calibration labs and quality control.



MODEL

GenRad 1644-A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

1644-A

LISTING

<https://aumictechlabs.com/products/1644-a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The GenRad 1644-A is a standard for impedance measurements, providing high accuracy and stability.

Features & description

From manufacturer datasheet

Built-in vacuum-tube detector and HV supply

Seven fixed test voltages 10 to 1000 V Self-checking internal standards Decade megohm ranges into teraohms Suitable for volume and surface resistivity setups Technical Specifications Resistance Range Class: 1 kOhm to 1000 TOhm in decade ranges Basic Accuracy 1 kOhm To 10 GOhm: plus or minus 1% Test Voltages Fixed: 10, 20, 50, 100, 200, 500, and 1000 V Short Circuit Current 10 To 50 V: less than 15 mA Short Circuit Current 100 To 1000 V: less than 10 mA Number Of Fixed Test Voltages: 7 Bridge Topology: modified Wheatstone Detector: built-in High Voltage Supply: built-in Intended Measurements: insulation resistance leakage high value resistors DeltaRCapability Class: to about plus or minus 0.2% on suitable ranges per reseller summaries External Resistor Voltage Class: intermediate voltages 10 to 1000 V obtainable with external resistor Self Checking Standards: yes Form Factor: laboratory megohm bridge Lower Resistance Bound: 1 kOhm Upper Resistance Bound Class: teraohm decades Accuracy Bound Principal: plus or minus 1% to 10 GOhm class Test Voltage Minimum: 10 V Test Voltage Maximum: 1000 V Decade Range Architecture: ten decade ranges class Replaced Prior Model Class: Type 544-B lineage

1644A Characteristics / Specifications

PARAMETER	VALUE
Resistance Range Class	1 kOhm to 1000 TOhm in decade ranges
Basic Accuracy 1 kOhm To 10 GOhm	plus or minus 1%
Test Voltages Fixed	10, 20, 50, 100, 200, 500, and 1000 V
Short Circuit Current 10 To 50 V	less than 15 mA
Short Circuit Current 100 To 1000 V	less than 10 mA
Number Of Fixed Test Voltages	7
Bridge Topology	modified Wheatstone
Detector	built-in
High Voltage Supply	built-in
Intended Measurements	insulation resistance leakage high value resistors
DeltaRCapability Class	to about plus or minus 0.2% on suitable ranges per reseller summaries
External Resistor Voltage Class	intermediate voltages 10 to 1000 V obtainable with external resistor
Self Checking Standards	yes
Form Factor	laboratory megohm bridge
Lower Resistance Bound	1 kOhm
Upper Resistance Bound Class	teraohm decades
Accuracy Bound Principal	plus or minus 1% to 10 GOhm class
Test Voltage Minimum	10 V
Test Voltage Maximum	1000 V
Decade Range Architecture	ten decade ranges class
Replaced Prior Model Class	Type 544-B lineage
Catalog Introduction Class	Catalog S 1965 era

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

specifications list seven fixed test voltages from 10 to 1000 V and basic accuracy of plus or minus 1% on principal ranges.	
Applications	
Insulation resistance of cables and components, semiconductor leakage, capacitor insulation resistance, and high-valued resistor measurement.	
Key Features	
Built-in vacuum-tube detector and HV supply	
Seven fixed test voltages 10 to 1000 V	
Self-checking internal standards	
Decade megohm ranges into teraohms	
Suitable for volume and surface resistivity setups	
Technical Specifications	
Technical Specifications	
PARAMETER	VALUE
Resistance Range Class	1 kOhm to 1000 TOhm in decade ranges
Basic Accuracy 1 kOhm To 10 GOhm	plus or minus 1%
Test Voltages Fixed	10, 20, 50, 100, 200, 500, and 1000 V
Short Circuit Current 10 To 50 V	less than 15 mA
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Bridge Topology	modified Wheatstone
Detector	built-in
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Form Factor	laboratory megohm bridge
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Upper Resistance Bound Class	teraohm decades
Accuracy Bound Principal	plus or minus 1% to 10 GOhm class
Test Voltage Minimum	10 V
Test Voltage Maximum	1000 V

PARAMETER	VALUE
Decade Range Architecture	ten decade ranges class
Replaced Prior Model Class	Type 544-B lineage
Catalog Introduction Class	Catalog S 1965 era

Notes
Specs from GenRad 1644-A published specification summaries (GRWiki). Prefer the instruction manual accuracy-versus-range table for authoritative limits above 10 GOhm.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.