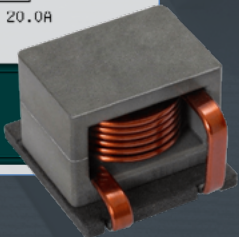
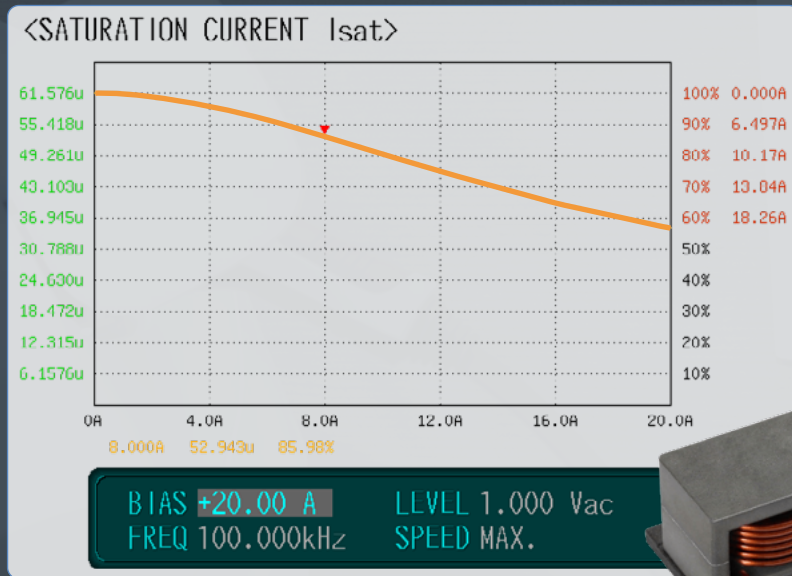


Your Inductance Testing Expert



Magnetic saturation current curve



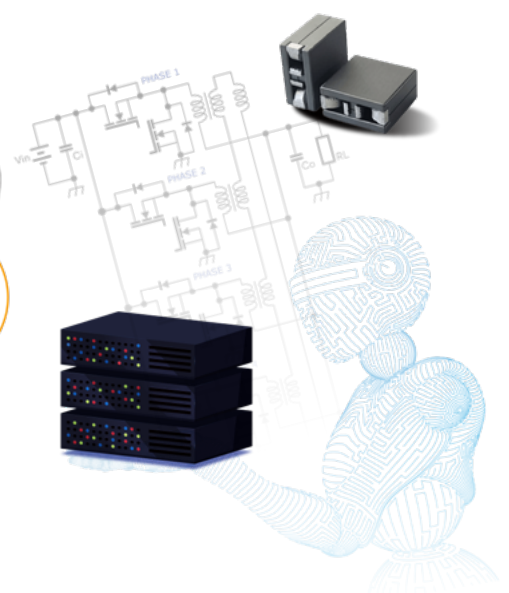
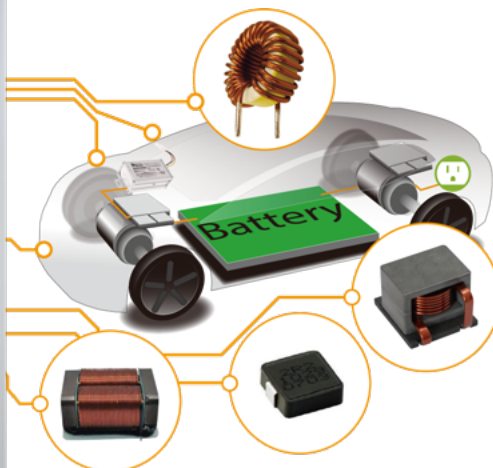
Rated current curve



High Frequency Response
 100Hz~10MHz

DC Bias Current Source Test System

Output Max Current up to 640A
 Frequency Response up to 10 MHz



The ideal choice for precise verification of magnetic saturation current (I_{sat}) and temperature rise current (I_{rms}) characteristics in inductors, coils, and transformers. Whether in R&D design or production testing, the MICROTTEST DC Bias Current Source Test System delivers high-precision current output to measure inductance variations under DC bias conditions. Furthermore, by utilizing the copper temperature coefficient as a foundation for temperature rise analysis, the system employs internal resistance (DCR) measurement technology to evaluate the thermal performance of inductors with greater objectivity and precision.

DC Bias Current Test System 6350+Series

Output Current Max. 320A
Frequency Range 100Hz~500kHz

Component Tester



The DC Bias Test System combines an LCR Meter with a DC Bias Current Source, enabling analysis of the saturation characteristics of inductors, coils, ferrite materials, and magnetic cores. It provides precise verification of a key magnetic component parameter — the magnetic saturation current (Isat). When integrated into production lines, users can select either a Meter Mode or Multi-Step Mode. Measurement results are displayed numerically, and the system also supports PC software connection for data storage and report analysis.

Application

Magnetic Components | Power Inductors, Common Mode Inductors, Filter Inductors, PFC Inductors
Magnetic Materials | Ferrite Absorber Materials, Alloy Magnetic Materials

Features

- Frequency range 100Hz~500kHz (6356)
- Supports maximum output DC bias current of 320A/ 120A
- DCR measurement function
- Can sustain maximum power output for long periods of time
- Output impedance: 100Ω
- Open/short circuit calibration function
- Supports Meter Measurement Mode/ Multi-Step List Testing
- The USB Host port supports stores test data and screenshots



• 6355/6356



• 6243



• 6223



Standard Interfaces

RS-232

USB Host

Handler

LAN

Specification

DC Bias Model	6223		6243	
LCR+DC Bias Frequency Range	100Hz~200kHz (6355)	100Hz~500kHz (6356)	100Hz~200kHz (6355)	100Hz~500kHz (6356)
Output Current Max.	120A		320A	
Output Current	20A		40A	
Current Accuracy	0.000A~1.000A 1%+5mA 1.001A~5.000A 2% 5.001A~40.000A 3%			
Power Consumption	320W Max.		640W Max.	
Constant Power Output	●		●	
DC Resistance	●		●	
LCR Meter Model	6355		6356	
Frequency Range	10Hz~200kHz		10Hz~500kHz	
Points of Test Frequency	Programmable			
Frequency Resolution	5 Digits			
Frequency Output Accuracy	±0.01%			
Basic Accuracy	±0.05%			
AC Drive Level	10mV~2Vrms (1mV Resolution)			
DC Drive Level	10mV~2V (1mV Resolution)			
Output Impedance	100Ω			
Measurement Parameters	Z , R, X	0.001mΩ~999.99GΩ		
	Y , G, B	0.1nS~99.999S		
	Cs Cp	0.01pF~9.9999F		
	Ls Lp	0.1nH~99.999kH		
	D	0.00001~9.9999		
	Q	0.1~9999.9		
	DCR	0.001mΩ~99.999MΩ		
	θ	-180° ~+180°		
AC/DC Test Speed	5mS			
Measurement Mode	Meter Mode/ Multi-Step Test Mode			

General

Trigger Test	Auto/ Manual/ RS-232/ Handler/ LAN/ GPIB (Option OP-635001)
Built-in Storage	128 sets
USB Host Storage	Testing screen and data
Interface	RS-232/ Handler
PC Link Software	●
Power Supply	Voltage : 88~132Vac or 195~264Vac (Switchable)
	Frequency : 47~63Hz
Power Consumption	300VA (6223)/ 600VA (6243)
Display	7.0" TFT, Color LCD (800*480)
Environment	Temperature : 10~40°C, Humidity : 20~90%RH
Dimension(W*H*D)	358x148x343 mm(6355/ 6356)/ 337x145x525mm(6223)/ 435x145x644mm(6243)
Weight	3Kg(6355/6356)/ 15Kg (6223)/ 20Kg (6243)

Functions

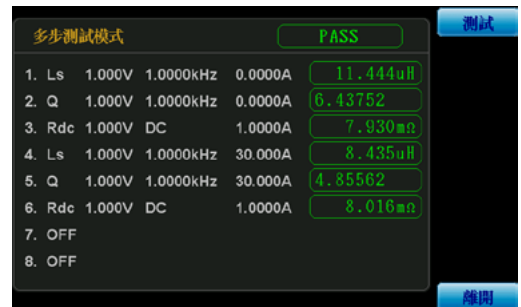
High-Current DC Bias Test System – Up to 320A Output (6355 + 6243 / 6356 + 6243)

Through instrument configuration, key inductor parameters such as Ls (Inductance) and Q (Quality Factor) can be measured. When applying a 30 mA DC bias current, the inductance value decreases from 11 μ H to 8 μ H.



Multi-Step Test Mode – Up to 8 Programmable Steps

In Multi-Step Mode, measurement conditions and parameters can be preset in up to eight steps. All results are displayed simultaneously for easy comparison and analysis.



Supports DCR (DC Resistance) Measurement Function

One of the key parameters of magnetic components such as inductors is DC Resistance (DCR), which reflects the component's impedance to DC current.

The DC resistance of an inductor is primarily determined by the conductor material and coil structure.

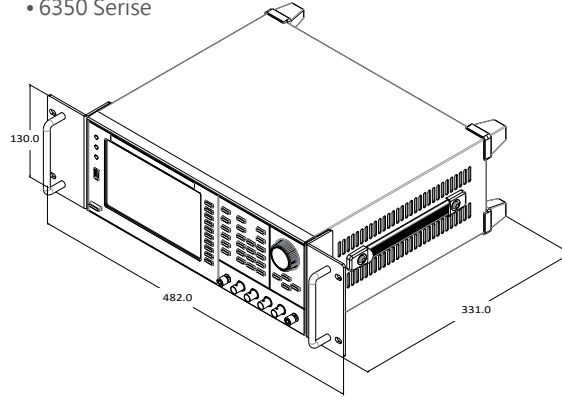
Measuring DCR provides valuable insight into power loss, energy efficiency, and circuit performance under DC conditions, helping evaluate circuit stability and overall design reliability.



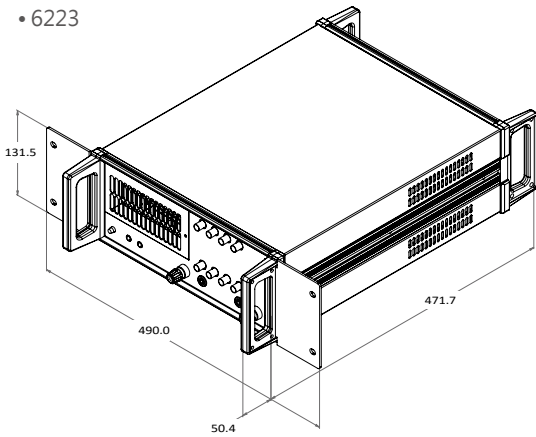
Automatic Chassis Dimension

• Dimension (mm)

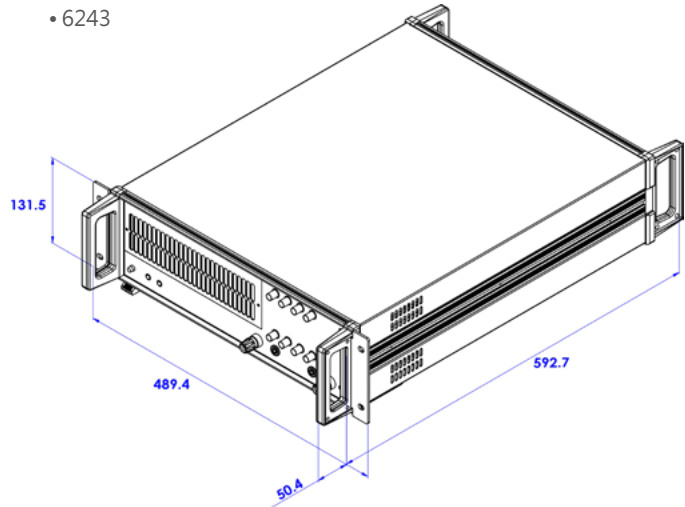
• 6350 Serie



• 6223



• 6243



Ordering Information

DC Bias Series	Standard	Optional
<ul style="list-style-type: none"> • 6223+6355(Frequency Range 100Hz~200kHz/Max.120A) • 6223+6356(Frequency Range 100Hz~500kHz/Max.120A) • 6243+6355(Frequency Range 100Hz~200kHz/Max.320A) • 6243+6356(Frequency Range 100Hz~500kHz/Max.320A) 	<ul style="list-style-type: none"> • TL-DB0001 Ground Wire (6cm) • TL-000008 LAN Cable (40cm) • AX-000001 Fuse (5A/250V)(Note*1) • Power Cord 	<ul style="list-style-type: none"> • FX-DB0001 4-wire SMD Test Fixture(120A/10MHz) • FX-LR0001 Automatic Level Compensation Fixture • F6210A 4-wire DIP Test Fixture(100A/10MHz) • F6240 4-wire DIP Test Fixture(320A/10MHz) • F420005 External Voltage/Current Bias(±40V/100mA) • TL-DB0002 BNC TO BNC Cable <p>Up to 120A (Length selectable according to rack configuration)</p> <ul style="list-style-type: none"> • AX-DB0001 Connect Plate-Black(L 16.7cm/W 2cm) Model.6223 • AX-DB0002 Connect Plate-Red(L 16.7cm/W 2cm) Model.6223 • AX-DB0003 Connect Plate-Black(L 25.7cm/W 2cm) Model.6223 • AX-DB0004 Connect Plate-Red(L 25.7cm/W 2cm) Model.6223 <p>Up to 320A (Length selectable according to rack configuration)</p> <ul style="list-style-type: none"> • AX-DB0005 Connect Plate-Red(L 16.7cm/W 2.6cm) Model.6243 • AX-DB0006 Connect Plate-Black(L 16.7cm/W 2.6cm) Model.6243 • AX-DB0007 Connect Plate-Black(L 25.7cm/W 2.6cm) Model.6243 • AX-DB0008 Connect Plate-Red(L 25.7cm/W 2.6cm) Model.6243 • AX-DB0009 Connect Plate-Black(L 16.7cm/W 3cm) Model.6243 • AX-DB0010 Connect Plate-Red(L 16.7cm/W 3cm) Model.6243 • TL-000003 RS-232 Cable (180cm) • OP-635001 GPIB Interface • PC Link Software

Note*1 | DC Bias Current Source 6210, 6220, 6223, and 6225 are equipped with a 5A Fuse (AX-000001)

Fixture & Accessories

TL-DB0001
Ground Wire



TL-000008
LAN Cable



AX-000001
Fuse



Applicable Models	DC Bias Series	DC Bias Series	6210/ 6220/ 6223/6225
Accessory Description	6cm	40cm	5A/250V

FX-DB0001
4-wire SMD Test Fixture



F6210A
4-wire DIP Test Fixture



F6240
4-wire DIP Test Fixture



Frequency	100Hz~10MHz	DC~10MHz	DC~10MHz
Max. Voltage/ Current	120A	100A	320A
Applicable Models	DC Bias Series	DC Bias Series	DC Bias Series
DUT Size	2.5 x 2.0mm ~ 7.4 x 5.1mm		

F420005
External Voltage/Current Bias
(±40V/100mA)



FX-LR0001
Automatic Level Compensation Fixture



Frequency	≤ 30 MHz	Frequency	100Hz~100kHz
Max. Voltage/ Current	DC ±40V	Output impedance	10 Ω (ON), 25 Ω/ 100 Ω (OFF)
Accessory Description	DC ±100mA	Output Voltage Sweeping	AC 0.1 ~ 1V rms (ALC ON)
Applicable Models	6632/ 6630	Max. Output Current	0.15A
		Applicable Models	6632/ 6630

TL-DB0002
BNC+BNC Cable



TL-000003
RS-232 Cable (180cm)



Applicable Models	DC Bias Series	DC Bias Series
Accessory Description	80mm	180cm

AX-DB0001
Connect Plate-Black



AX-DB0002
Connect Plate-Red



Applicable Models	6210/ 6220/ 6223	6210/ 6220/ 6223
Accessory Description	Length 16.7cm Width 2cm	Length 16.7cm Width 2cm

AX-DB0005
Connect Plate-Red



AX-DB0006
Connect Plate-Black



Applicable Models	6240/ 6243	6240/ 6243
Accessory Description	Length 16.7cm Width 2.6cm	Length 16.7cm Width 2.6cm

AX-DB0003
Connect Plate-Black



AX-DB0004
Connect Plate-Red



Applicable Models	6210/ 6220/ 6223	6210/ 6220/ 6223
Accessory Description	Length 25.7cm Width 2cm	Length 25.7cm Width 2cm

AX-DB0007
Connect Plate-Black



AX-DB0008
Connect Plate-Red



Applicable models	6240/ 6243	6240/ 6243
Accessory Description	Length 25.7cm Width 2.6cm	Length 25.7cm Width 2.6cm

AX-DB0009
Connect Plate-Black



AX-DB0010
Connect Plate-Red



AX-DB0011
Connect Plate-Black



Applicable Models	6243	6243	6243H
Accessory Description	Length 16.7cm Width 3cm	Length 16.7cm Width 3cm	Length 25.7cm Width 3cm

AX-DB0012
Connect Plate-Red



AX-DB0013
Connect Plate-Black



AX-DB0014
Connect Plate-Red



Applicable Models	6243H	6243H	6243H
Accessory Description	Length 25.7cm Width 3cm	Length 60cm Width 3.5cm	Length 60cm Width 3.5cm