DC Bias Current Test System

6210/6220/6240+6632
6223/6225/6243+6632

Features

- Current and frequency graphic scanning analysis
- Temperature-rising scan function can solve the problems of overheating a DUT to burn
- DCR Measurement function
- Long-term consecutive maximum power output
- Interchangeable bi-direction current function
- Frequency response
  100Hz-10MHz (With DC Bias Current 6223/6243),
  100Hz-30MHz (With DC Bias Current 6225)
- DC Bias Current Max.320A (6243)
- Direct Handler interfaces control through LCR power meter

CE RS-232 Handler

Accessories / Fixtures

Standard

- Power Cord
- Ethernet cable
- Black/Red thermoplastic sleeve (6210)
- F6210 (DIP)

Optional

- PC Link software
- F6220 (SMD)
- 6210/6220/6240 connect plate (short/long)
- BNC+BNC cable
- F6220/F6240 (SMD)

Applications

Components: High current power inductor, common mode choke, mini molding choke, high power components of EV charging connector

Electric Vehicles: Electric supercharger system

Specifications

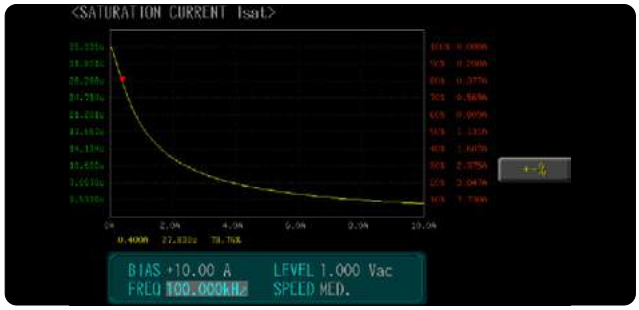
DC Bias Model Name	6210	6223/6220	6225	6243/6240
Output Current	10A	20A	20A	40A
Accuracy	0.000A-1.000A 1%+5mA			
	1.001A-5.000A 2%			
	5.001A-20.000A 3%			
Power Consumption	6225/6223/6220/6210 (320W Max.) 6243/6240 (640W Max.)			
LCR Meter / Impedance Analyzer	**6632**			
Frequency (Hz)	10Hz-1/ 3/ 5/ 10/ 20/ 30M/ 50MHz			
AC Drive Level	10mV-2Vrms			
DC Drive Level	1V (Fixed)			
Output Impedance	25Ω, 100Ω (switchable)			
Measurement Parameters and Ranges	R, X	±0.000mΩ-9999.99MΩ		
	|Y|	0.00000µS-999.999kS		
	G, B	±0.00000µS-999.999kS		
	θRAD	±0.00000-3.14159		
	θDEG	±0.000°-180.000°		
	Cs, Cp	±0.00000pF-9999.99F		
	Ls, Lp	±0.00nH-9999.99kH		
	D	0.00000-9999.99		
	Q	0.00-9999.99		
	Δ	±0.00%-9999.99%		
	Rdc	0.00mΩ-99.9999MΩ		
	εr' εr''	0-100000		
	µr' µr''	0-100000		
Output Current (Max.)/ Frequency Response	60A Max./ 3MHz (6210+6632) 120A Max./ 3MHz (6220+6632) 120A Max./ 10MHz (6223+6632) 20A Max./ 30MHz (6225+6632) 320A Max./ 3MHz (6240+6632) 320A Max./ 10MHz (6243+6632)			
Constant Power Output	●			
Current Switch	●			
DC Resistance	●			
Current Graphic Scanning Analysis	●			
Frequency Graphic Scanning Analysis	●			
Temperature Rise	●			

General

Power Supply	Voltage 88-264Vac
	Frequency 47-63Hz
Interface	RS-232, Handler
Trigger Test	Auto, Manual, RS-232, GPIB, Handler
Environment	Temperature: 10-40℃, Humidity: 20-90%RH
Dimension (W*H*D)	356×147×497mm (6225) 337×145×525mm (6223/6220/6210) 435×145×525mm (6240) 435×145×644mm (6243)
Weight	15Kg (6225/6223/6220/6210), 20Kg (6243/6240)

Key Features

A Accurately Test Magnetics Carrying DC Bias Current



Isat (Magnetic saturation current curve)

The value of the inductance is 2.06983uH.

Using a DC Bias current source to apply a 10A bias current to the inductor, the inductance decreased from 2.06983uH to 1.02845uH.

Irms (Rated current curve)

Inductor copper foil cracked due to high temperature

Magnetic saturation current is called I sat, and the temperature rise current is called I rms. When the transformer and the inductor pass a large current in the actual circuit operation, the magnetic field of the magnetic core will produce magnetic saturation, which will cause the inductance characteristic to decline. Therefore, the R&D engineer will set the current value of the inductance reduction allowable range.

B DC Bias Fixtures

F6210
Standard Fixture

F6220
SMD Fixture

Standard fixture F6210 for measuring inductance, optional fixture F6220 for measuring SMD inductance.

C Rack-mounted System

Reserve space for expanding current, support computer connection software, and save measurement data.