DC Bias Current Test System
6225 + 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
– Frequency response 100Hz-30MHz
– DC Bias Current Max.20A
– 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/F622501 (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 chargingconnector

Electric Vehicles: Electric supercharger system

Specifications

DC Bias Model Name	6225	
Frequency response	100Hz-30MHz	
Output Current	20A	
Accuracy	0.000A-1.000A 1%+5mA	
	1.001A-5.000A 2%	
	5.001A-20.000A 3%	
Power Consumption	320W 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	20A Max./30MHz (6225+6632)	
Constant Power Output	●	
Current Switch	NA	
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
Weight	15Kg

Key Features

A	About DC Bias Test for the Inductor
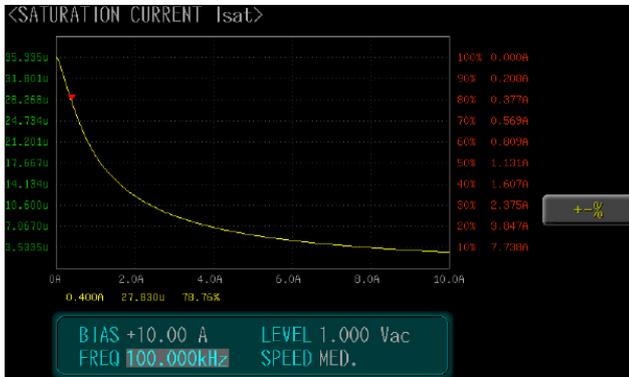
Ferromagnetic materials (like iron) are composed of microscopic regions called magnetic domains. The stronger the external magnetic field H, the more the domains align, yielding a higher magnetic flux density B. Eventually, The magnetization remains nearly constant, and is said to have saturated. The domain structure at saturation depends on the temperature.

How DC Bias current helps inductor testing?

	Isat	Irms
	10%-30%	20%-40%

DC Bias current testing range for saturation (I sat) and temperature (I rms).

In electronic circuits, transformers and inductors with ferromagnetic cores operate nonlinearly when the current through them is large enough to drive their core materials into saturation. This means that their inductance and other properties vary with changes in drive current. In linear circuits this is usually considered an unwanted departure from ideal behavior.

B	High frequency response 100Hz-30MHz

6225+6632 DC Bias Current Test System boasts frequency responses clocked at 100Hz to 30MHz, and an output current max at 20A.

The 6632 offers a current graphical scan to inspect I sat and Irms. Engineers can analyze the curve of temperature changes and saturation of inductors and view the results in real-time to see if the specifications would burn out components due to the temperature. Under the list mode function, customers can select multiple parameters with just one setting and show all the test results simultaneously on the screen.
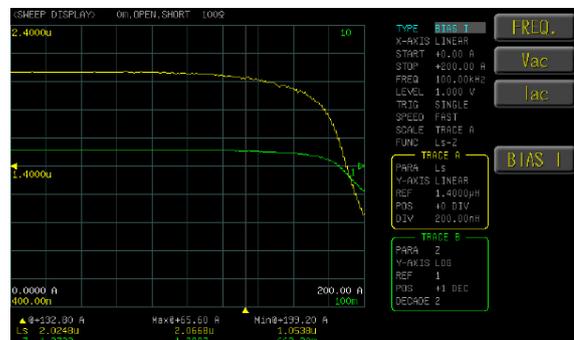
The areas in which the DC Bias Current Test System sees the most common application are testing passive components' power inductors, common mode chokes, and high-power devices for EV charging stations. In the EV area, testing components like EV turbochargers and EV systems would benefit the most from the DC Bias Current Test System.