

Automatic Transformer Tester SM6029 Series



Features

- 20 pin transformer scanning test + LCR option
- Up to 1MHz test frequency, 0.5mHz resolution
- Signal amplitude range: 5mV to 10Vrms, 100µV resolution
- Test speed is up to 75meas/sec.
- Wider impedance test range and better stability for small signal test
- Built-in 0-100mA/0-10V bias source (standard) or 1A bias source (optional)
- Diode P/N characteristic detection can test all parameters of network transformer.
- Improved high turn ratio and weak coupling transformer test ability
- Improved DCR test ability for low-ohm winding
- On single screen all test results.
- To display one or two groups of primary and secondary parameters is selectable in LCR test.
- Flexible deviation and deduction modes
- Flexible time-labeling system: time of file setting, calibration and deduction can be saved.
- Sort the selected scanning parameters
- Self-test scanning fixture relays and ensure they work well.
- Single parameter test cycle can be used to test a separate winding.
- Two separate passwords for administer and operator can improve test security and reliability.
- Internal memory for up to 200 setting files and external USB memory for more
- Test data and graphs can be saved as CSV, GIF format to USB memory.
- The built-in software provides analysis abilities, such as Cpk, Cp and Ck.
- To program setting files through PC
- 7-inch 16:9 TFT LCD display with a resolution of 800×480

Technical Specifications		SM6029A	SM6029B	SM6029C
Frequency Range		20Hz– 200kHz	20Hz– 500kHz	20Hz– 1MHz
Accuracy		0.01%		
Resolution		0.5mHz		
Basic Accuracy	LCRZ	0.05%		
	DCR, Turn Ratio	0.1%		
Output Impedance of Signal Sources		10Ω, 30Ω, 50Ω, 100Ω (Selectable), ±1% @ 1kHz		
Level of AC Test Signal				
Normal Level	Voltage	5mV – 10Vrms (minimum resolution : 100µV) Accuracy : 10% x set voltage +2mV		
	Current	50µA – 100mArms (minimum resolution : 1µA)		
Constant Level	Voltage	10mV – 5Vrms (minimum resolution : 100µV) Accuracy : 10% x set voltage +2mV		
	Current	100µA– 50mArms (minimum resolution : 1µA)		

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DC bias voltage source	0V – ± 10V	Min resolution 0.5mV, Accuracy : 1% x set voltage + 5mV		
	0mA – ± 100mA	Min. resolution : 0.5 μA		
DC constant current source (optional) (for diode P/N characteristic test)		0 – ±120mA (Min. resolution : 0.5μA, Accuracy : 1% x set voltage + 0.2mA) Load Open Voltage : ≤ 5V		
DC bias current source (optional)		0 – ± 1A (Min. resolution : 0.5mA, Accuracy : 1% x set voltage + 2mA) Load Open Voltage : ≤ 9V		
Transformer test parameters		Turn Ratio, Turns, Phase, L,C, Lk, Q, ACR, DCR, Balance, Pin Short, Diode P/N		
LCR test parameters		Z , Y , C, L, X, B, R, G, D, Q, q, DCR, Turn Ratio, Phase, Lk		
Display ranges of DCR		0.00001Ω – 999.999MΩ		
Display ranges of turn ratio		1:0.001 – 1000:1		
Display ranges of LCR parameters	Z , R, X	0.00001Ω – 99.9999MΩ		
	Y , G, B	0.00001μs – 99.9999s		
	C	0.00001pF – 9.99999F		
	L	0.00001μH – 99.9999kH		
	D	0.00001 – 9.99999		
	Q	0.00001 – 99999.9		
	θ (DEG)	- 179.999° – 179.999°		
	θ (RAD)	- 3.14159 – 3.14159		
	Δ %	- 999.999% – 999.999%		
Diode test	Positive voltage	0 – 9.9999V		
	Negative Current	0 – 99.999mA		
Measurement speed (≥ 10kHz)		Fast : 75meas/sec (13ms), Medium : 11means/sec (90ms), Slow : 2.7 meas/sec (370ms)		
Equivalent circuit		Series, Parallel		
Range mode		Auto, Hold		
Trigger mode		Internal, Manual, External, Bus		
Average times		1 – 255		
Calibration function		Open, Short, Load		
Math operation		Direct, reading, Δ ABS, Δ%		
Delay time		0 – 60.000s, 1ms resolution		
Comparator		10 bin sorting, BIN 1 – BIN9, NG, AUX		
		Bin counter		
		PASS/FAIL on front panel, LED indication on scanning fixture		
Memory		200 sets of LCRZ setting files		
		200 sets of setting files for transformer scanning		
		10 sets of GIF files		
Interface	Control Interface	Handler (Optional) on rear panel, Transformer scanning Test Fixture		
	Communication Interface	USB HOST, RS232C, LAN, GPIB (Optional)		
	Memory Interface	USB HOST		
General Specifications				
Display		7-inch 16:9 TFT LCD display with a resolution of 800×480		
Operating conditions		0°C – 40°C, ≤ 90% RH		
Supply		198V – 242V AC, 47Hz– 63Hz		
Power Consumption		Max. 80VA		
Dimensions (WxHxD)		430mm x 185mm x 473mm		
Weight		Approx. 13kg		

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Accessories			
Standard	Mains cord, 4 Terminal Kelvin Test Cable (SMA26011AS), Handler/ Scanner cable (SMA26016), 2 Terminal Test Cable(SMA26004B), Manual Transformer scanning test fixture (SMA1901B), Foot switch (SMA1901-001), CD		
Options	LCR Function (SM6029-LCR)		
	DC Bias Current 0-1A (SMA2901)		
	DC Bias Current 0-2A (SMA2902)		
	Pneumatic Transformer Scanning Test Fixture (SMA1901A)		

Technical Specification of Transformer Scanning Test Fixture



SMA1901A/B

Model	SMA1901A (Optional)	SMA1901B (Standard)
Transformer locking mode	Pneumatic	Manual
Output - pin	20 Pin	
Soft-pin output	Pin1, Pin20, Pin10, Pin11 are used to test 4 transformer soft-pins	
Distributed capacitance of scanning output-pin	2.0pF – 6.0pF	
Control test on panel	START, RESET, PASS/FAILED indicators	
Input / Output signals on Handler interface (output from scanning fixtures)	Power : +5V, GND Input : Start, Reset Pass/Fail signal Output : Pass, Fail TTL level	
Working power output of magnetic valve	+24V	
External start mode	Foot switch	
Scanning Control Interface	Scanning control connection cable	
Working power output of magnetic value	0°C to 40°C, ≤90%RH	
Dimensions (W X H X D)	270mm x186mm x 62mm	
Weight	3.1 kg (Approx)	

Subject to Change



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