

# Precision LCR Meter SM6023/SM6024



## Features

- Basic accuracy: 0.05%
- 6 digit reading resolution
- Maximum test frequency of 200 kHz
- Low cost, high performance, small size
- Soft power switch
- DCR, 50 mV-2 V programmable test level, resolution 10 $\mu\Omega$
- Maximum test speed: 13 ms/time
- Selectable 30 $\Omega$ /100 $\Omega$  signal source impedance
- V/I monitor and auto level adjustment function
- Built-in comparator, 10 bins sorting and count function
- Pass/ Fail function
- File storage and program update through U disk
- RS232, RS485, USB, HANDLER, GPIB interface
- 4.3" TFT LCD display

Model		SM6023	SM6024
Test Frequency :		50Hz-100kHz , 34points	20Hz-200kHz, 15025 points
Measurement Parameters		L, C, R, X,  Z ,  Y , B, G, D, Q, $\theta$ , DCR	
Display Range	L :	0.00001 $\mu$ H — 99.9999kH	
	C :	0.00001pF — 9.99999F	
	DCR :	0.00001 $\Omega$ — 99.9999M $\Omega$	
	Z , R, X :	0.00001 $\Omega$ — 99.9999M $\Omega$	
	Y ,B, G :	0.00001 $\mu$ s — 99.9999s	
	D :	0.00001 — 9.99999	
	Q :	0.00001 — 99999.9	
	$\theta$ (Deg) :	-179.999° — 179.999°	
	$\theta$ (Rad) :	-3.14159 — 3.14159	
$\Delta$ % :	-999.999% — 999.999%		
Basic Accuracy	LCRZ	0.05%	
	DCR	0.1%	
Resolution		6 Digit	
Signal source output impedance		Selectable 30 $\Omega$ , 100 $\Omega$ , $\pm$ 1%@1kHz	
Equivalent circuit		Serial, Parallel	
Range Mode		Auto, Hold	

Model		SM6023	SM6024
AC test signal level	Normal	10mV - 2Vrms	
		Resolution : 10mv, Accuracy : 10%x setting voltage + 2mv	
		100 $\mu$ A-20mArms	
		Resolution : 0.1mA	
	Constant level (ALC ON)	—	20mV -1Vrms
		—	Resolution : 10mV, Accuracy :10%
—		200 $\mu$ A – 10mArms	
—		Resolution : 0.1 mA	
DCR Test Singl level		1VDC	50mV – 2VDC
		—	Resolution : 0.5 mV
DC bias voltage source		—	0V – $\pm$ 5 V
		—	Resolution : 0.5 mV, Accuracy 1%
		—	0mA – $\pm$ 50mA
		—	Resolution : 0.5 $\mu$ A
Measurement time ( $\geq$ 10kHz)		Fast : 75 meas /Sec (13ms), Medium : 11 meas/sec (90ms), Slow : 2.7 meas /Sec (370ms)	
Trigger Mode		Internal, Manual, External, Bus	
Average Time		1 – 255	
Zero Compensation		Open, Short, Load	
Math operation		Absolute Value, $\Delta$ ABS, $\Delta$ %	
Trigger delay time setting		0 – 60.000s, 1ms steps	
Step delay time setting		0 – 60.000s, 1ms steps	
List Sweep		10 points list sweep, Frequency, AC voltage /current / external bias voltage / current can be swept, Each sweep point can be sorted separately	
Comparator function		10 bins, BIN1-BIN9, NG, AUX , Bin count function, Pass/Fail LED display on front panel	
Built-in Storage		Internal 100 LCRZ instrument setting files, 201 times test result	
USB Storage		Instrument setting files, measurement Result CSV files, Printed screen (GIF format)	
Interface		Handler, USB HOST, USB DEVICE (U-disk storage), RS232C, RS485 (option), GPIB (Option)	
<b>General Information</b>			
Display		4.3" TFT LCD Display	
Operating Condition		0°C – 40°C, $\leq$ 90%RH	
Supply		230V 10% ,50 Hz AC	
Dimension (W X H X D)		215 X 88 X 335mm (Rack Mount), 235 x 105 x 360 mm (with sheath)	
Weight		Approx 3.6 kg.	
Standard Accessories		4 Terminal Pair Kelvin Test Clip Leads (SMA26011CS), Shorting Plate(SMA26010) 4 Terminal Component Test Fixture (SMA26048A), USB Cable, RS232 Cable, CD	
Optional Accessories		SMD Kelvin test tweezers Metallic body (SMA26009B) SMD Kelvin test tweezers Plastic body (SMA26029B)	

Subject to change



SMA26011CS



SMA26048A



SMA26010



SMA26009B



SMA26029B

**scientific**

**Scientific Mes-Technik Pvt. Ltd.**

B-14, Pologround, Industrial Estate, Indore 452 015, India

☎ 0731-2422330/31/32/33

📄 0731-2422334

✉ sales@scientificindia.com

🌐 www.scientificindia.com



Bengaluru 080-23452635  
Chennai 044-42054180  
Gujarat +917567463752  
Hyderabad +917095228811

✉ bangalore@scientificindia.com  
✉ chennai@scientificindia.com  
✉ gujarat@scientificindia.com  
✉ hyderabad@scientificindia.com

Kolkata +917095228811  
Mumbai +919850901735  
New Delhi +918889912554  
Pune +919850901735

✉ kolkata@scientificindia.com  
✉ mumbai@scientificindia.com  
✉ ndelhi@scientificindia.com  
✉ pune@scientificindia.com