SPM Series Source Technical Specification

The instrument must be operated continuously for more than 30 minutes at the specified operating temperature to achieve the following specifications:

Power Supply

Specification	SPM3051	SPM6053	SPM3103	SPM6103
Input Characteristics				
Supply Voltage	110Vac±10% or 220Vac±10%, please supply power according to the mark on the left of the power input socket on the rear panel of the instrument			
Input Frequency	50~60Hz	50~60Hz	50~60Hz	50~60Hz
Input Parameter 1（110Vac±10%）				
Input Voltage Range	93~ 127Vac	93~ 127Vac	93~ 127Vac	93~ 127Vac
Full Load Input Current	≤2.8A	≤5.6A	≤5.6A	≤5.6A
No-Load Input Current	≤200mA	≤300mA	≤300mA	≤300mA
Input Fuse	250V,F5A	250V,F10A	250V,F10A	250V,F10A
Input Parameter 2（220Vac±10%）				
Input Voltage Range	187~253Vac	187~253Vac	187~253Vac	187~253Vac
Full Load Input Current	≤1.4A	≤2.8A	≤2.8A	≤2.8A
No-Load Input Current	≤100mA	≤150mA	≤150mA	≤150mA
Input Fuse	250V,F3A	250V,F5A	250V,F5A	250V,F5A
Rated Output				
Voltage	0~30V	0~60V	0~30V	0~60V
Current	0~5A	0~5A	0~ 10A	0~ 10A
Power	150W	300W	300W	300W
Efficiency (110Vac, rated	80%	80%	80%	80%

load)				
Efficiency (220Vac, rated load)	85%	85%	85%	85%
Regulation(CV)				
Load	≤30mV	≤30mV	≤30mV	≤30mV
Line	≤20mV	≤20mV	≤20mV	≤20mV
Regulation(CC)				
Load	≤30mA	≤30mA	≤30mA	≤30mA
Line	≤20mA	≤20mA	≤20mA	≤20mA
Ripple & Noise (Noise bandwidth 20MHz, ripple bandwidth 1MHz, connect 10uF electrolytic capacitor in parallel with 0.1uF ceramic capacitor to the output terminal for testing)				
Voltage (Vp-p)	≤30mV	≤30mV	≤30mV	≤50mV
Voltage (rms)	≤3mV	≤3mV	≤3mV	≤5mV
Current (Ap-p)	≤30mA	≤30mA	≤30mA	≤30mA
Setting Resolution				
Voltage	10mV	10mV	10mV	10mV
Current	1mA	1mA	1mA	1mA
Readback Resolution				
Voltage	10mV	10mV	10mV	10mV
Current	1mA	1mA	1mA	1mA
Setting Accuracy				
Voltage	≤0.1%±20mV	≤0.1%±20mV	≤0.1%±20mV	≤0.1%±30mV
Current	≤0.1%±10mA	≤0.1%±10mA	≤0.1%±10mA	≤0.1%±10mA
Readback Accuracy				
Voltage	≤0.1%±20mV	≤0.1%±20mV	≤0.1%±20mV	≤0.1%±30mV
Current	≤0.1%±10mA	≤0.1%±10mA	≤0.1%±10mA	≤0.1%±10mA
Response time				
Transient recovery time (50%~100% rated load)	≤1ms			
Protective function				

OVP	0~31V	0~61V	0~31V	0~61V
OCP	0~5.1A	0~5.1A	0~ 10.1A	0~ 10.1A
OTP	85℃	85℃	85℃	85℃
Temperature coefficient of output				
Voltage	100ppm/℃			
Current	200ppm/℃			
Temperature coefficient of readback value				
Voltage	100ppm/℃			
Current	200ppm/℃			

Multimeter

Characteristics	Description	
Display	4½ bit (Max. reading 20000)	
Measurement	Voltage, Current, Resistance, Capacitance, Diode, Continuity	
Input impendance	≥10 MΩ	
Diode	0~2V	
	Range	**Accuracy**
DC Voltage	200.00mV	±(0.3%+10dig)
	2.0000V/20.000V/200.00V	±(0.3%+5dig)
	1000.0V	
AC Voltage	200.00mV /2.0000V/20.000V/200.00V	±(0.8%+10dig)
	750V	±(1.0%+10dig)
DC Current	200.00mA	±(0.8%+10dig)
	10.000A	±(2.5%+10dig)
AC Voltage	200.00mA	±(1.0%+10dig)
	10.000A	±(2.8%+10dig)
Resistance	200.00Ω/2.0000kΩ/20.000kΩ/ 200.00kΩ/2.0000MΩ	±(0.8%+10dig)
	20.000MΩ	±(1.0%+3dig)
	100.00MΩ	±(5.0%+10dig)
Capacitance [1](F)	20.000nF/200.00nF/2.0000uF/ 20.000uF/200.00uF/2.0000mF	±(3.0%+10dig)
Frequency response(Hz)	(40 - 1000)Hz	--

[1] The accuracy guarantee range for AC voltage/current and capacitance

measurements is from 5% to 100% of the range.

Others

Display	
Display Type	2.8inches color LCD
Resolution	240 × 320 pixels
Color	65536 color,TFT
Environment	
Temperature	Working Temperature:0℃～40℃ Storage Temperature:-20℃～60℃
Relative Humidity	≤90%RH; no condensation
Height	2,000 meters
Cooling	Fan cooling, temperature intelligent speed control
Other	
Communication Port	Provides three optional interfaces: USB, LAN, and RS232, compatible with the SCPI communication protocol.
USB Charging Port	5V/1A charging
Dimension	82mm(Width)× 142mm(Height)×226mm(Length)
Weight	Approx. 1.5 kg

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V1.0.1