SIGLENT Probe

Data Sheet

EN01E

SIGLENT TECHNOLOGIES CO.,LTD

Passive Probe

Parameter \ Model	PB470	PP510	PP215	SP2035
				
Attenuation Rate	1X/10X	1X/10X	1X/10X	1X/10X
Bandwidth	10X: DC-70MHz	10X: DC-100MHz	10X: DC-200MHz	350MHz
Input Impedance	1MΩ/10MΩ	1MΩ/10MΩ	1MΩ/10MΩ	1MΩ/10MΩ±2%
Input Capacitance	10X: 13pF-17pF	10X: 13pF-17pF	10X: 13pF-17pF	1X: 85pF-120pF 10X: 17pF-20pF
Compensation Range	10pF-35pF	10pF-35pF	10pF-35pF	10pF-35pF
Input Voltage	1X: 150V RMS CAT II 10X: 300V RMS CAT II	1X: 150V RMS CAT II 10X: 300V RMS CAT II	1X: 150V RMS CAT II 10X: 300V RMS CAT II	1X: 150V RMS CAT II 10X: 300V RMS CAT II
Operation Temp	-10℃ ~ 55℃	-10℃ ~ 55℃	-10℃ ~ 55℃	-10℃ ~ 55℃
Cable Length	130 cm	130 cm	130 cm	130 cm
Weight	55g	55g	55g	About 55g

Parameter \ Model	SP2035A	SP3050A	SP3150A	SP5035A
				
Attenuation Rate	10X	10X	10X	10X
Bandwidth	350MHz	500MHz	500MHz	350MHz
Input Impedance	10MΩ±2%	10MΩ	10MΩ	10MΩ
Input Capacitance	12pF	11pF	11pF	12pF
Compensation Range	9pF-25pF	8pF-20pF	8pF-20pF	12pF-22pF
Input Voltage	10X: 300V RMS CAT II	400V RMS CAT II	400V RMS CAT II	300V RMS CAT II
Operation Temp	-10℃ ~ 55℃	0℃ ~ 50℃	0℃ ~ 50℃	-10℃ ~ 55℃
Cable Length	130 cm ± 2 cm	120 cm	120 cm	130cm
Weight	About 55g	55g	55g	55g

Parameter \ Model	SP5050A	PB925
		
Attenuation Rate	10X	10X
Bandwidth	500MHz	250MHz
Input Impedance	10MΩ	10MΩ
Input Capacitance	12pF	16pF
Compensation Range	12pF-22pF	10pF-35pF
Input Voltage	300V RMS CAT II	600 V CAT III 1000 V CAT II
Operation Temp	-10℃ -55℃	0℃ -50℃
Cable Length	130cm	120cm
Weight	55g	55g

Single-Ended Active Probe

Parameter \ Model	SAP1000	SAP2500
		
Bandwidth	1GHz	2.5GHz
Input Impedance	1MΩ	1MΩ
Input Capacitance	1.2pF	1.1pF
Input Dynamic Range	±8V	±8V
Offset Range	±12V	±12V
Non-Destruct Voltage	20V	20V
Interface	SAPBus	SAPBus
Cable Length	130cm	130cm

High-Frequency Differential Active Probe

Parameter \ Model	SAP2500D	SAP5000D
		
Bandwidth (probe only)	>2.5 GHz	>5 GHz
Bandwidth (with scope)	2 GHz（SDS6204A）	4 GHz（SDS7404A）
Differential Input Capacitance	1 pF	400 fF
Differential Input Resistance	200 kΩ	20 kΩ
Single-ended Input Resistance	100 kΩ	10 kΩ
Offset Range	±8 V	±12 V
Attenuation Ratio (DC)	÷10	÷10
Offset Accuracy	< 3%	< 3%
DC Gain Accuracy	< 3%	< 3%
Input Dynamic Range	±4 V	±2.5 V
Maximum Input Voltage (non-destructive)	20 V	20 V
Interface	SAPBus	SAPBus
Cable Length	130 cm	130 cm

Active Probe Adapter

Parameter \ Model	LPA10	TPA10
		
Bandwidth	4GHz	4GHz
Power Supplies	+12V (±2%) - 12V (±2%)	+15V (±2%, 100 mA), - 15V (±2%, 100 mA), +5V (±2%, 200 mA), - 5V (±2%, 200 mA)
Offset Range		- 1.2V ~ +1.2V to probe

Current Probe

Parameter \ Model	CP4020	CP4050	CP4070	CP4070A
				
Bandwidth	DC-200kHz	DC-1MHz	DC-300kHz	DC-300kHz
Rise Time	1.75μS	0.35μS	1.2μS	1.2μS
Max. effective Value of AC	20 Arms	50 Arms	70 Arms	70 Arms
Peak-Peak Value	60 A	140 A	200 A	200 A
Range Switch	50mV/A；5mV/A	500mV/A；50mV/A	50mV/A；5mV/A	100mV/A；10mV/A
DC Accuracy	±2%±0.4A at 50mV/A (0.4A-10A p-p range); ±2%±1A at 5mV/A (1A-60A p-p range)	±3%±20mA at 500mV/A (20mA-14A peak range); ±4%±200mA at 50mV/A (200mA-100A peak range); ±15% max at 50mV/A (100A peak-140A peak range)	±2%±0.4A at 50mV/A (0.4A-10A p-p range); ±2%±1A at 5mV/A (1A-200A p-p range)	±3%±50mA at 100mV/A (50mA-10A peak range); ±4%±50mA at 10mV/A (500mA - 40A peak range); ±15% max at 10mV/A (40A-200A peak range)
Power Supply	DC 9V Adapter			
Max. rated Voltage to earth	CAT III 600V, CAT II 600V	CAT III 300V, CAT II 600V	CAT III 600V, CAT II 600V	
Conductor Size	10.3mm	10.3mm	10.3mm	11mm

Parameter \ Model	CP6030	CP6030A	CP6150	CP6500
				
Bandwidth	DC-50MHz	DC-100MHz	DC-12MHz	DC-5MHz
Rise Time	≤ 7nS	≤ 3.5nS	≤ 29nS	≤ 70nS
Max. effective Value of AC	30 Arms	30 Arms	150 Arms	500 Arms
Peak-Peak Value	50 A	50 A	300 A	750 A
Range	5A(1X)/30A(10X)	5A(1X)/30A(10X)	30A(10X)/150A(100X)	75A(10X)/500A(100X)
Overload Value	5A(≥5A) 30A(≥50A)	5A(≥5A) 30A(≥50A)	30A(≥30A) 150A(≥300A)	75A(≥75A) 500A(≥750A)
Current Transfer Ratio	5A(1V/A) 30A(0.1V/A)	5A(1V/A) 30A(0.1V/A)	30A(0.1V/A) 150A(0.01V/A)	75A(0.1V/A) 500A(0.01V/A)
Measurement Resolution	5A(1mA) 30A(10mA)	5A(1mA) 30A(10mA)	30A(10mA) 150A(100mA)	75A(10mA) 500A(100mA)
DC Accuracy	5A(±1%±1mA) 30A(±1%±10mA)	5A(±1%±1mA) 30A(±1%±10mA)	30A(±1%±10mA) 150A(±1%±100mA)	75A(±1%±10mA) 500A(±1%±100mA)
Max. rated Voltage to earth	300V CAT I		300V CAT III	600V CAT II
Conductor Diameter Max	5mm		20mm	
Cable Length	1m		1.5m	
Power Supply	DC 12V/1A			
BNC Length	100cm			
Weight	255g		555g	525g

Parameter \ Model	CPL5100	
		
Range Level	23℃ , 60%RH, cable under test get through the test center, load resistance 1MΩ	
Current Range	L	H
Attenuation Accuracy	50mA~10A Peak	1A~100A Peak
Typical DC Precision	0.1V/A	0.01V/A
DC Accuracy	3%±50mA	500mA~40A Peak: 4%±50mA; 40A~100A Peak: ±15% Maximum
Bandwidth (-3dB)	DC-600kHz	
Phase Shift	DC ~ 65Hz: <1.5°	DC ~ 65Hz: <1°
Typical DC Linearity	The typical DC linearity at H level (0.01 V/A)	
Rise Time	≤ 583ns	
Max Operation Current	10A	100A
Max Operation Voltage	600V	
Max Floating Voltage	600V	
Operating Voltage RMS	CATI 600V CATII 600V CATIII 300V	
Common Mode Voltage RMS	CATI 600V CATII 600V CATIII 300V	
Typical Battery Type and Life	9 V alkaline layer-built battery/ 15 H	
Low Power Indication	When battery voltage is lower than 6.5 V, battery indicator will turn red and alert	
Overload Indication	When the current under test surpasses the range, the buzzer will buzz	
Length of the Cable connecting current clamp and output box	1 m	
Length of double terminal BNC Cable	1 m	

Parameter \ Model	SCP5030	SCP5030A	SCP5150	SCP5500
				
Bandwidth	DC-50MHz	DC-100MHz	DC-12MHz	DC-2MHz
Rise Time	≤ 7nS	≤ 3.5nS	≤ 29nS	≤ 175nS
Max. effective Value of AC	30 Arms	30 Arms	150 Arms	500 Arms
Peak-Peak Value	50 A	50 A	300 A	750 A
Range	5A(1X)/30A(10X)	5A(1X)/30A(10X)	30A(10X)/150A(100X)	75A(10X)/500A(100X)
Overload Value	5A(≥5A) 30A(≥50A)	5A(≥5A) 30A(≥50A)	30A(≥30A) 150A(≥300A)	75A(≥75A) 500A(≥750A)
Current Transfer Ratio	5A(1V/A) 30A(0.1V/A)	5A(1V/A) 30A(0.1V/A)	30A(0.1V/A) 150A(0.01V/A)	75A(0.1V/A) 500A(0.01V/A)
Measurement Resolution	5A(1mA) 30A(10mA)	5A(1mA) 30A(10mA)	30A(10mA) 150A(100mA)	75A(10mA) 500A(100mA)
DC Accuracy	5A(±1%±1mA) 30A(±1%±10mA)	5A(±1%±1mA) 30A(±1%±10mA)	30A(±1%±10mA) 150A(±1%±100mA)	75A(±1%±10mA) 500A(±1%±100mA)
Max. rated Voltage to earth	300V CAT I		300V CAT III	600V CAT II
Conductor Diameter Max	5mm		20mm	
Power Supply	Directly powered by the oscilloscope through SAPBUS			
Weight	270g		475g	

High-Voltage Differential Active Probe

Parameter \ Model		DPB5150	DPB5150A	DPB5700	DPB5700A
					
Bandwidth (-3dB)		70MHz	100MHz	70MHz	100MHz
Rise Time		≤ 5ns	≤ 3.5ns	≤ 5ns	≤ 3.5ns
DC Accuracy		±2%	±2%	±2%	±2%
Attenuation Ratio		50X/500X		100X/1000X	
Max Differential Test Voltage (DC + Peak AC)		50X: ±150V 500X: ±1500V		100X: ±700V 1000X: ±7000V	
Max Input Common Mode voltage (voltage-to-earth Vrms)		600V CATIII 1000V CATII		1000V CATIII 2300V CATI	
Input Impedance	Single-ended to Ground	5MΩ	5MΩ	20MΩ	20MΩ
	Two Inputs	10MΩ	10MΩ	40MΩ	40MΩ
Input Capacitance	Single-ended to Ground	< 4pF	< 4pF	< 5pF	< 5pF
	Two Inputs	< 2pF	< 2pF	< 2.5pF	< 2.5pF
CMRR	DC	> 80dB	> 80dB	> 80dB	> 80dB
	100kHz	> 60dB	> 60dB	> 60dB	> 60dB
	1MHz	> 50dB	> 50dB	> 50dB	> 50dB
Noise (Vrms)		50X: <50mV 500X: <300mV		100X: <200mV 1000X: <1.2V	
Propagation Delay		Probe: ≈9ns		BNC Line(1m): ≈5ns	
Bandwidth Limit		≥ -3dB@5MHz			
Differential Overvoltage Detection Level		50X: ≥ 150V 500X: ≥ 1500V		100X: ≥ 700V 1000X: ≥ 7000V	
Overload Indicator (red light)		YES			
Overload Alarm		YES (Can shut up manually)			
Automatic Save		YES			
Offset Setting Function		YES (Set in test mode)			
Terminate Load		≥100kΩ			
Power Supply		USB 5V/1A Adapter			
Probe Body Dimensions		195*65*28 mm			
Probe Body Weight		216g		216g	

Parameter \ Model		DPB1300	DPB4080
			
Bandwidth (-3dB)		50MHz	50MHz
Rise Time		≤ 7ns	≤ 7ns
DC Accuracy		±2%	±1%
Attenuation Ratio		50X/500X	
Max Differential Test Voltage (DC + Peak AC)		50X: ±130V 500X: ±1300V	10X: 80Vpp 100X: 800Vpp
Max Input Common Mode voltage (voltage-to-earth Vrms)		600V CATIII 1000V CATII	5kVrms
Input Impedance	Single-ended to Ground	5MΩ	2MΩ
	Two Inputs	10MΩ	4MΩ
Input Capacitance	Single-ended to Ground	< 4pF	< 2.5pF
	Two Inputs	< 2pF	< 1.3pF
CMRR		DC > 80dB	60Hz > 80dB
		100kHz > 60dB	100Hz > 50dB
		1MHz > 50dB	100kHz > 50dB
Noise (Vrms)		50X: < 50mV 500X: < 300mV	
Propagation Delay		Probe: ≈10ns BNC Line(1m): ≈5ns	
Bandwidth Limit		Null	
Differential Overvoltage Detection Level		50X: ≥ 140V 500X: ≥ 1400V	
Overload Indicator (red light)		YES	Null
Terminate Load		≥ 100kΩ	1MΩ
Power Supply		DC12V/1.2A Adapter	6V DC Power
Probe Body Dimensions		145*58*24 mm	165*69*26 mm
Probe Body Weight		165g	500g

High Voltage Probe

Parameter \ Model		HPB4010
		
Bandwidth（-3dB）		DC-40MHz
Rise Time		≤8.8ns
Max. Measurement Voltage		DC: 0~10kV DC AC: pulse ≤ 20kV peak to peak AC: sine wave ≤ 7kV rms
Single / Noise		DC ≥ 60dB(1kHz), ≥ 50dB(1MHz)
Attenuation Ratio		1:1000
Input Impedance		100MΩ±5%
Input Capacitance		3.0pF±0.5pF
Compensation Range		5pF~50pF
Cable length		2.0meter(±0.2M)
Temperature Coefficient		≤ 200ppm/℃
Accuracy	DC	±3% (DC to 10kV)
	AC	±3% (1kHz/1kV/1kHz RMS) -3dB: 0~40MHz
Operating Temperature		0~50℃
Storage Temperature		-20 ~ +70℃
Weight / Volume		250g/Φ75×340 mm

Logic Probe

Parameter \ Model	SPL3016	SPL2016	SLA1016
			
Input Channels	16	16	16
Input Impedance	100kΩ||5pF	100kΩ||18pF	100kΩ||8pF
Maximum Input Voltage	±30V Peak	±50V Peak	±20V Peak
Input Dynamic Range	±20V	±20V	±10V
User defined threshold range	-10V ~ 10V (20mV steps)	-10V ~ 10V (10mV steps)	-8V ~ 8V (10mV steps)
Threshold Selections	TTL (1.4V)、 5V_CMOS (2.5V)、 ECL(-1.3V)	TTL(1.5V)、CMOS(2.5V)、 3.3V_LVCMOS(1.65V)、 2.5V_LVCMOS(1.25V)	TTL(1.5V)、CMOS(2.5V)、 3.3V_LVCMOS(1.65V)、 2.5V_LVCMOS(1.25V)
Threshold Accuracy	±（3% of threshold setting +100mV）	±（3% of threshold setting +200mV）	±（3% of threshold setting +150mV）
Threshold Groupings	Group 2：D15-D8 Group 1：D7-D0	Group 2：D15-D8 Group 1：D7-D0	Group 2：D15-D8 Group 1：D7-D0
Minimum Input Voltage Swing	800mVpp	800mVpp	800mVpp
Maximum Input Data Rate	250Mbps	300 Mbps	120 Mbps
Minimum Detectable Pulse Width	4ns	3.3ns	8.3ns
Channel-to-Channel Skew	± 1 digital sample interval	± 1 digital sample interval	± 1 digital sample interval

Near Field Probe

Parameter \ Model	SRF5030T-H20	SRF5030T-H10	SRF5030T-H5	SRF5030T-E5
				
Frequency Range	300kHz to 3 GHz	300kHz to 3 GHz	300kHz to 3 GHz	300kHz to 3 GHz
Resolution	20mm	10mm	5mm	5mm
Application	The SRF5030T Near Field Probe Kit includes magnetic (H) and electric (E) probes for EMC pre-compliance testing to locate radiation sources in electronics. A near-field probe is similar to a broadband antenna, detecting radiated signals from components, PCB boards, gaps in shielding covers, etc. The use of smaller probes allows for greater accuracy in locating the radiation area. Other applications include: shock immunity testing, troubleshooting in RF signal chains, non-invasive testing of modulators and oscillators, measuring frequency, phase, spectral components, etc. with LNAs.			

About SIGLENT

SIGLENT is an international high-tech company, concentrating on R&D, sales, production and services of electronic test & measurement instruments.

SIGLENT first began developing digital oscilloscopes independently in 2002. After more than a decade of continuous development, SIGLENT has extended its product line to include digital oscilloscopes, isolated handheld oscilloscopes, function/arbitrary waveform generators, RF/MW signal generators, spectrum analyzers, vector network analyzers, digital multimeters, DC power supplies, electronic loads and other general purpose test instrumentation. Since its first oscilloscope was launched in 2005, SIGLENT has become the fastest growing manufacturer of digital oscilloscopes. We firmly believe that today SIGLENT is the best value in electronic test & measurement.

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