

SIGLENT Probe Data Sheet



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Data Sheet


E01A



SIGLENT TECHNOLOGIES CO.,LTD



Passive Probe

| Model Parameter | PB470 | PP510 | PP215 | SP2035 |
|--------------------|---|---|--|---|
| |  |  |  |  |
| Attenuation Rate | 1X/10X | 1X/10X | 1X/10X | 1X/10X |
| Bandwidth | 10X: 70MHz | 10X: 100MHz | 10X: 200MHz | 10X: 350MHz |
| Input Impedance | 1MΩ/10MΩ | 1MΩ/10MΩ | 1MΩ/10MΩ | 1MΩ/10MΩ |
| Input Capacitance | 1X: 85pF-120pF 10X: 18.5pF-22.5pF | 1X: 85pF-120pF 10X: 18.5pF-22.5pF | 1X: 85pF-120pF 10X: 18.5pF-22.5pF | 1X: 85pF-120pF 10X: 17pF-20pF |
| Compensation Range | 10pF-35pF | 10pF-35pF | 10pF-35pF | 10pF-55pF |
| 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°C ~55°C | -10°C ~55°C | -10°C ~55°C | -10°C ~55°C |
| Cable Length | 130 cm | 130 cm | 130 cm | 130 cm |
| Weight | 55g | 55g | 55g | 55g |


| Model Parameter | SP2035A | SP3050A | SP5035A | SP5050A |
|--------------------|---|---|--|---|
| |  |  |  |  |
| Attenuation Rate | 10X | 10X | 10X | 10X |
| Bandwidth | 350MHz | 500MHz | 350MHz | 500MHz |
| Input Impedance | 10MΩ | 10MΩ | 10MΩ | 10MΩ |
| Input Capacitance | 12pF | 11pF | 12pF | 12pF |
| Compensation Range | 9pF-25pF | 8pF-20pF | 12pF-22pF | 12pF-22pF |
| Input Voltage | 10X: 300V RMS | 400V RMS CAT II | 300V RMS CAT II | 300V RMS CAT II |
| Operation Temp | -10°C ~55°C | 0°C ~50°C | -10°C ~55°C | -10°C ~55°C |
| Cable Length | 130 cm | 120 cm | 130cm | 130cm |
| Weight | 55g | 55g | 55g | 55g |

| Parameter \ Model | PB925 |
|--------------------|--|
| |  |
| Attenuation Rate | 10X |
| Bandwidth | 250MHz |
| Input Impedance | 10M Ω |
| Input Capacitance | 16pF |
| Compensation Range | 10pF-35pF |
| Input Voltage | 600 V CAT III 1000 V CAT II |
| Operation Temp | 0°C -50°C |
| Cable Length | 120cm |
| Weight | 55g |





Single-Ended Active Probe





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

High-Frequency Differential Active Probe

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



Current Probe



| Model Parameter | CP4020 | CP4050 | CP4070 | CP4070A |
|-----------------------------|---|--|--|---|
| |  |  |  |  |
| Bandwidth | DC-200kHz | DC-1MHz | DC-300kHz | DC-300kHz |
| Rise Time | 1.75 μ S | 0.35 μ S | 1.2 μ S | 1.2 μ S |
| 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 | $\pm 2\% \pm 0.4A$ at 50mV/A (0.4A-10A p-p range); $\pm 2\% \pm 1A$ at 5mV/A (1A-60A p-p range); | $\pm 3\% \pm 20mA$ at 500mV/A (20mA-14A peak range); $\pm 4\% \pm 200mA$ at 50mV/A (200mA-100A peak range); $\pm 15\%$ max at 50mV/A (100A peak-140A peak range); | $\pm 2\% \pm 0.4A$ at 50mV/A (0.4A-10A p-p range); $\pm 2\% \pm 1A$ at 5mV/A (1A-200A p-p range); | $\pm 3\% \pm 50mA$ at 100mV/A (50mA-10A peak range); $\pm 4\% \pm 50mA$ at 10mV/A (500mA - 40A peak range); $\pm 15\%$ max at 10mV/A (40A-200A peak range); |
| Power Supply | 9V battery | | | |
| 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 |

| Model Parameter | 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(≥50A) 500A(≥500A) |
| 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°C , 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 | |

High-Voltage Differential Active Probe


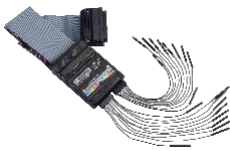
| Model | | DPB5150 | DPB5150A | DPB5700 | DPB5700A |
|---|------------------------|---|----------|--|----------|
| Parameter | |  | |  | |
| Bandwidth (-3dB) | | 70MHz | 100MHz | 70MHz | 100MHz |
| Rise Time | | ≤ 5ns | ≤ 3.5ns | ≤ 5ns | ≤ 3.5ns |
| DC Accuracy | | ±2% | ±2% | ±2% | ±2% |
| Attenuation 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 | | 8ns |
| Max. Measurement Voltage | | DC: 0~10kV AC: $\leq 10\text{kV rms}$ (Sine Wave) Peak-Peak: 0-30kV(Pulse) |
| Single / Noise | | DC $\geq 60\text{dB}$ (1kHz), $\geq 50\text{dB}$ (1MHz) |
| Attenuation Ratio | | 1:1000 |
| Input Impedance | | 100M Ω \pm 1% |
| Input Capacitance | | 3.0pF \pm 0.5pF |
| Compensation Range | | 5pF~50pF |
| Cable length | | 2.0meter (\pm 0.2M) |
| Temperature Coefficient | | $\leq 200\text{ppm}/^\circ\text{C}$ |
| Accuracy | DC | \pm 3% |
| | AC | \pm 3% (1kHz/1kV) -3dB 50MHz |
| Operating Temperature | | 0~50 $^\circ\text{C}$ |
| Storage Temperature | | -20~ + 70 $^\circ\text{C}$ |
| Weight / Volume | | 250g/ Φ 75 \times 340 mm |

Logic Probe

| Parameter | Model | SPL2016 | SPL1016 |
|--------------------------------|-------|---|---|
| | |  |  |
| Input Channels | | 16 | 16 |
| Input Impedance | | 100kΩ 18pF | 100kΩ 8pF |
| Maximum Input Voltage | | ±50V Peak | ±20V Peak |
| Input Dynamic Range | | ±20V | ±10V |
| User defined threshold range | | -10V ~ 10V (10mV steps) | -8V ~ 8V (10mV steps) |
| Threshold Selections | | 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 +200mV) | ± (3% of threshold setting +150mV) |
| Threshold Groupings | | Group 2: D15-D8 Group 1: D7-D0 | Group 2: D15-D8 Group 1: D7-D0 |
| Minimum Input Voltage Swing | | 800mVpp | 800mVpp |
| Maximum Input Data Rate | | 300 Mbps | 120 Mbps |
| Minimum Detectable Pulse Width | | 3.3ns | 8.3ns |
| Channel-to-Channel Skew | | ± 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 | <p>The SRF5030T Near Field Probe Kit includes magnetic (H) and electric (E) probes for EMC pre-compliance testing to locate radiation sources in electronics.</p> <p>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.</p> <p>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.</p> | | | |

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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