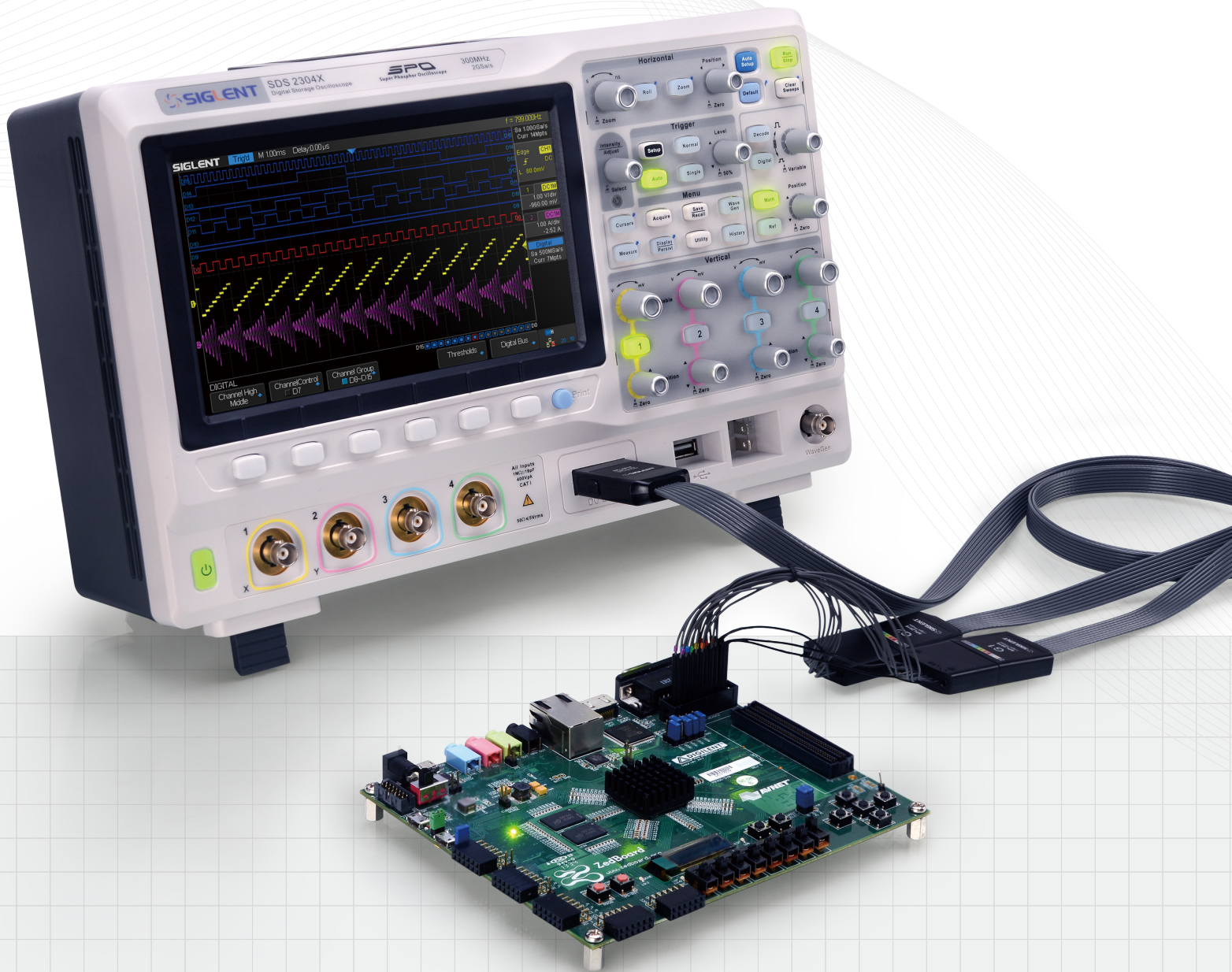







DataSheet SIGLENT Series Probe




Passive Probe

| Parameter | Model | PB470 | PP510 | PP215 | PP430 |
|---------------------------|-------|---|---|--|---|
| | |  |  |  |  |
| Attenuation Rate | | 1 X/10 X | 1 X/10 X | 1 X/10 X | 1 X/10 X |
| Bandwidth | | 10 X: DC-70 MHz | 10 X: DC-100 MHz | 10 X: DC-200 MHz | 10 X: DC-300 MHz |
| Input Impedance | | 1 M Ω /10 M Ω | 1 M Ω /10 M Ω | 1 M Ω /10 M Ω | 1 M Ω /10 M Ω |
| Input Capacitance | | 1 X: 85 pF-120 pF 10 X: 18.5 pF-22.5 pF | 1 X: 85 pF-120 pF 10 X: 18.5 pF-22.5 pF | 1 X: 85 pF-120 pF 10 X: 18.5 pF-22.5 pF | 1 X: 85 pF-120 pF 10 X: 18.5 pF-22.5 pF |
| Compensation Range | | 10 pF-35 pF | 10 pF-35 pF | 10 pF-35 pF | 10 pF-35 pF |
| Input Voltage | | 1 X: 150V RMS CAT II 10 X: 300V RMS CAT II | 1 X: 150V RMS CAT II 10 X: 300V RMS CAT II | 1 X: 150V RMS CAT II 10 X: 300V RMS CAT II | 1 X: 150V RMS CAT II 10 X: 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 | | 55 g | 55 g | 55 g | 55 g |

| Parameter | PB925 | SP2030A | SP2035A | SP3050A |
|---------------------------|--|--|---|--|
| |  |  |  |  |
| Attenuation Rate | 10 X | 10 X | 10 X | 10 X |
| Bandwidth | DC-250 MHz | DC-300 MHz | DC-350 MHz | DC-500 MHz |
| Input Impedance | 10 M Ω | 10 M Ω | 10 M Ω | 10 M Ω |
| Input Capacitance | 16 pF | 12 pF | 12 pF | 11 pF |
| Compensation Range | 10 pF-35 pF | 9 pF-25 pF | 9 pF-25 pF | 8 pF-20 pF |
| Input Voltage | 600 V CAT III 1000 V CAT II | 10 X: 300 V RMS | 10 X: 300 V RMS | 400V rms CAT II |
| Operation Temp | 0 °C -50 °C | -10 °C -55 °C | -10 °C -55 °C | 0 °C -50 °C |
| Cable Length | 120 cm | 130 cm | 130 cm | 120 cm |
| Weight | 55 g | 55 g | 55 g | 55 g |


Active Probe

| Parameter | Model | SAP1000 |
|-----------------------------|-------|--|
| | |  |
| Bandwidth | | 1 GHz |
| Input Impedance | | 1 MΩ |
| Input Capacitance | | 1.2 pF |
| Input Dynamic Range | | ±8 V |
| Offset Range | | ±12 V |
| Non-Destruct Voltage | | 20 V |
| Interface | | SAPBus |
| Cable Length | | 130 cm |
| Weight | | 83 g |







Current Probe

| Parameter | Model | CP4020 | CP4050 | CP4070 | CP4070A |
|------------------------------------|-------|---|--|--|---|
| | |  |  |  |  |
| Bandwidth | | DC-100 kHz | DC-1 MHz | DC-150 kHz | DC-300 kHz |
| Rise time | | ≤3.5 μs | ≤0.35 μs | ≤2.3 μs | ≤1.2 μs |
| 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 | | 50 mV/A; 5 mV/A | 500 mV/A; 50 mV/A | 50 mV/A; 5 mV/A | 100 mV/A; 10 mV/A |
| DC Accuracy | | ±2% (0.4 A-10 ApK) at 50 mV/A ±2% (1 A-60 ApK) at 5 mV/A | ±3%±20 mA (20 mA-14 ApK) at 500 mV/A; ±4%±200 mA (200 mA-100 ApK) at 50 mV/A; ±15% max (100 A-140 ApK) at 50 mV/A | ±2% (0.4 A-10 ApK) at 50 mV/A ±2% (1 A-200 ApK) at 5 mV/A | ±3%±50 mA (50 mA-10 ApK) at 100 mV/A; ±4%±50 mA (500 mA-40 ApK) at 10 mV/A; ±15% max (40 A-200 ApK) at 10 mV/A |
| Power Supply | | 9 V battery | | | |
| Max. rated voltage to earth | | 300 V CAT III 600 V CAT II | | | |
| Conductor Size | | 10.3 mm | 10.3 mm | 10.3 mm | 11 mm |
| Cable Length | | 200 cm | 100 cm | 100 cm | 100 cm |
| Weight | | 310 g | 310 g | 310 g | 260 g |


| Parameter | Model | CP5030 | CP5030A | CP5150 | CP5500 |
|------------------------------------|-------|---|---|--|---|
| | |  |  |  |  |
| Bandwidth | | DC-50 MHz | DC-100 MHz | DC-12 MHz | DC-5MHz |
| Rise time | | ≤7 ns | ≤3.5 ns | ≤29 ns | ≤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 | | 5 A (1 X)/ 30 A (10 X) | 5 A (1 X) / 30 A (10 X) | 30 A (1X)/150 A(10 X) | 75 A (1 X)/500 A(10 X) |
| Overload Value | | 5 A (≥5 A) 30 A (≥50 A) | 5 A (≥5 A) 30 A (≥50 A) | 30 A(≥30 A) 150 A (≥300 A) | 75 A (≥50 A) 500 A (≥500 A) |
| Current Transfer Ratio | | 5 A (1 V/A) 30 A (0.1 V/A) | 5 A (1 V/A) 30 A (0.1 V/A) | 30 A (0.1 V/A) 150 A (0.01 V/A) | 75 A (0.1 V/A) 500 A (0.01 V/A) |
| Measurement Resolution | | 5 A (1 mA) 30 A (10 mA) | 5 A (1 mA) 30 A (10 mA) | 30 A (5 mA) 150 A (50 mA) | 75 A (5 mA) 500 A (50 mA) |
| DC Accuracy | | 5 A (±1%±1 mA) 30 A (±1%±10 mA) | 5 A (±1%±1 mA) 30 A (±1%±10 mA) | 30 A (±1%±10 mA) 150 A (±1%±100 mA) | 75 A (±1%±10 mA) 500 A (±1%±100 mA) |
| Power Supply | | DC 12 V/1.2 A | | | |
| Max. rated voltage to earth | | 300 V CAT III | | 300 V CAT III 600 V CAT II | |
| Conductor Diameter Max. | | 5 mm | | 20 mm | |
| Cable Length | | 1 m | | 1.5 m | |
| BNC Length | | 100 cm | | | |
| Weight | | 240 g | | 500 g | 510 g |

| Parameter | CPL5100 |
|--|---|
| |  |
| Range level | 23°C , 60%RH, cable under test get through the test center, load resistance 1MΩ |
| Current range | L H |
| Attenuation accuracy | 50 mA~10 A Peak 1 A~100 A Peak |
| Typical DC precision | 0.1 V/A 0.01 V/A |
| Band width (-3dB) | 3%±50 mA 1500 mA~40 A Peak: 4%±50 mA; 40 A~100 A Peak: ±15% Maximum |
| Phase shift | DC~65 Hz: <1.5° DC~65 Hz: <1° |
| Typical DC linearity | The typical DC linearity at H level (0.01 V/A), Figure 4 |
| Rise time | ≤583 ns |
| Max operation current | 10 A 100 A |
| Max operation voltage | 600 V |
| Max floating voltage | 600 V |
| Operating voltage RMS | CATI 600 V CATII 600 V CATIII 300 V |
| Common mode voltage RMS | CATI 600 V CATII 600 V CATIII 300 V |
| 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 turned 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 |
| Weight | About 223 g (without battery) |




High Voltage Differential Probe

| Parameter | Model | DPB5150 | DPB5150A | DPB5700 | DPB5700A | DPB1300 | DPB4080 |
|--|-------------------------------|---|---|---|--|---|---|
| | |  |  |  |  |  |  |
| Bandwidth | | DC-70 MHz | DC-100 MHz | DC-70 MHz | DC-100 MHz | DC-50 MHz | DC-50 MHz |
| Rise time | | ≤5 ns | ≤3.5 ns | ≤5 ns | ≤3.5 ns | ≤7 ns | ≤7 ns |
| DC Accuracy | | ±2% | ±2% | ±2% | ±2% | ±2% | ±1% |
| Attenuation Ratio | | 50 X/500 X | | 100 X/1000 X | | 50 X/500 X | |
| Max Differential Test Voltage (DC + Peak AC) | | 50 X: 150 V 500 X: 1500 V | | 100 X: 700 V 1000 X: 7000 V | | 50 X: ±130 V 500 X: ±1300 V | 10 X: 80 V 100 X: 800 V |
| Max input common Mode voltage (voltage-to-earth Vrms) | | 600 V CATIII 1000 V CATII | | 1000 V CATIII 2300 V CATII | | 600 V CATIII 1000 V CATII | 800 Vrms |
| Input Impedance | Single-ended to ground | 5 MΩ | 5 MΩ | 20 MΩ | 20 MΩ | 5 MΩ | 27 MΩ |
| | Two inputs | 10 MΩ | 10 MΩ | 40 MΩ | 40 MΩ | 10 MΩ | 54 MΩ |
| Input Capacitance | Single-ended to ground | < 4 pF | < 4 pF | <5 pF | <5 pF | <4 pF | < 2.3 pF |
| | Two inputs | < 2 pF | < 2 pF | < 2.5 pF | < 2.5 pF | < 2 pF | < 1.2 pF |
| CMRR | DC | > 80 dB | > 80 dB | > 80 dB | > 80 dB | > 80 dB | > 80 dB |
| | 100kHz | > 60 dB | > 60 dB | > 60 dB | > 60 dB | > 60 dB | > 60 dB |
| | 1MHz | > 50 dB | >50 dB | > 50 dB | > 50 dB | > 50 dB | > 50 dB |
| Noise (Vrms) | | 50 X: <50 mV 500 X: <300 mV | | 100 X: < 200 mV 1000 X: < 1.2 V | | 50 X: < 50 mV 500 X: < 300 mV | Null |
| Propagation Delay | | 18 ns±1 ns | | | | Probe: ≈10 ns BNC Line (1m): ≈ 5 ns | Null |
| Bandwidth limit | | ≥-3 dB@5 MHz | | | | | Null |
| Differential overvoltage Detection level | | 50 X: ≥150 V 500 X: ≥1500 V | | 100 X: ≥700 V 1000 X: ≥7000 V | | 50 X: ≥140 V 500 X: ≥1400 V | Null |
| Overload indicator(red light) | | Yes | | | | | Null |
| Overload Alarm | | Yes (Can shut up manually) | | | | | |
| Automatic Save | | Yes | | | | Null | Null |
| Offset Setting function | | Yes (Set in test mode) | | | | | |
| Terminate Load | | 1 MΩ | | | | ≥100 kΩ | Null |
| Power Supply | | USB 5 V/1 A Adapter | | | | DC 12 V/1.2 A Power | 9 V DC Power |
| Probe body dimensions | | 195*65*28 mm | | | | 145*58*24 mm | 165*69*26 mm |
| Probe body weight | | Approx 188 g | | Approx 190 g | | Approx 165 g | Approx 500 g |


High Voltage Probe

| Parameter | Model | HPB4010 |
|---------------------------------|-----------|--|
| | |  |
| Bandwidth | | DC-40 MHz |
| Rise time | | ≤7 ns |
| Max. Measurement Voltage | | DC: 0~10 kV DC AC: pulse ≤ 20 kV peak to peak; sine wave ≤ 7 kV rms |
| Single / Noise | | DC≥60 dB(1 kHz),≥50 dB(1 MHz) |
| Attenuation Ratio | | 1:1000 |
| Input Impedance | | 100 MΩ±1% |
| Input Capacitance | | 3.0 pF±0.5 pF |
| Compensation Range | | 5 pF~50 pF |
| Cable length | | 2.0 meter (±0.2 M) |
| Temperature Coefficient | | ≤200 ppm/°C |
| Accuracy | DC | ±2% (DC to 10 kV) ±3% (Above 10 kV) |
| | AC | ±3% (1 KHz/1 KV) -3 dB 50 MHz |
| Operating Temperature | | 0~50 °C |
| Storage Temperature | | -20~+70 °C |
| Weight / Volume | | 250 g/Φ75×340 mm |

Logic Probe

| parameter | Model | SPL2016 | SPL1016 | SPL1008 |
|---------------------------------------|-------|---|--|---|
| | |  |  |  |
| Input Channels | | 16 | 16 | 8 |
| Input Impedance | | 100kΩ 18pF | 100kΩ 8pF | 100kΩ 18pF |
| Maximum Input Voltage | | ±50V Peak | ±20V Peak | ±40V Peak |
| Input Dynamic Range | | ±20V | ±10V | ±20V |
| User defined threshold range | | -10V~10V (10mV steps) | -8V~8V (10mV steps) | -3V~3V (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) | TTL(1.5V), CMOS(2.5V), 3.3V_LVCMOS(1.65V), 2.5V_LVCMOS(1.25V) |
| Threshold Accurac | | ±(3% of threshold setting +200mV) | ±(3% of threshold setting +150mV) | ±(3% of threshold setting +400mV) |
| Threshold Groupings | | Group 2: D15-D8 Group 1: D7-D0 | Group 2: D15-D8 Group 1: D7-D0 | D7-D0 |
| Minimum Input Voltage Swing | | 800mVpp | 800mVpp | 800mVpp |
| Maximum Input Data Rate | | 300 Mbps | 120 Mbps | 120Mbps |
| Minimum Detectable Pulse Width | | 3.3ns | 8.3ns | 8.3ns |
| Channel-to-Channel Skew | | ± (1 digital sample interval) | ± (1 digital sample interval) | ± (1 digital sample interval) |

Near Field Probe

| Parameter | Model | SRF5030-1 | SRF5030-2 | SRF5030-3 | SRF5030-4 |
|------------------------|-------|---|--|--|---|
| | |  | | | |
| Frequency Range | | 30 MHz to 3 GHz | 30 MHz to 3 GHz | 30 MHz to 2 GHz | 30 MHz to 3 GHz |
| Resolution | | 25 mm | 10 mm | 5 mm | 2 mm |
| Application | | It can be used at a distance of up to 10 cm from the units. The probe detects the spatial distribution of HF magnetic fields in devices and assemblies and allows the user to draw conclusions with regard to disturbance emissions. Frequency range:30 MHz to 3 GHz | It is suitable for measurements up to 3 cm. Interference sources can be localized by detecting the distribution and orientation of the field, therefore enabling a more exact use of higher resolution probes. Frequency range: 30 MHz to 3 GHz | It is suitable for measurements up to 3 cm. Interference sources can be localized by detecting the distribution and orientation of the field, therefore enabling a more exact use of higher resolution probes. Frequency range: 30 MHz to 3 GHz | It is designed for the detection of magnetic fields which are emitted vertically from the surface of PCBs and is thus ideal for investigating current loops. The probe allows the measurement in confined board areas (between large controller components, for example - resolution approx. 2 mm). Frequency range: 30 MHz to 3 GHz |

DataSheet SIGLENT Series Probe



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, function/arbitrary waveform generators, digital multimeters, DC power supplies, spectrum analyzers, isolated handheld oscilloscopes and other general purpose test instrumentation. Since its first oscilloscope, the ADS7000 series, 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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