

# ACCESSORIES

## Current Probe and Differential Probe Selections



GCP-300/500/1000



GCP-530/1030, GCP-206P/425P



GDP-025



GDP-050/100



GDP-040D (for GDS-300/200 only)

In addition to the standard passive probes, the optional current or differential probes can be used to perform additional tests or power analysis.

The differential probes come in three bandwidths: 25MHz, 50MHz and 100MHz. The current probes come in a broad variety of bandwidth and current ranges (ranging from 50MHz/30A, 100MHz/30A, 300kHz/200A, 500kHz/150A, 1MHz/70A), to cover any number of power supply testing applications.

\* The GCP-530/1030 must be used in conjunction with the GCP-206P/425P current probe power supply.

\* The GCP-206P is capable of powering 2 units of GCP-530 or GCP-1030 and the GCP-425P is capable of powering 4 units.

### CURRENT PROBE

|                                | GCP-300  | GCP-500  | GCP-530   | GCP-1000  | GCP-1030  |
|--------------------------------|--|--|---|---|---|
| Probe Bandwidth                | DC~300kHz  | DC~500kHz  | DC~50MHz  | DC~1MHz   | DC~100MHz   |
| Rise Time                      | 1.17µs (Typ.)  | 0.7µs (Typ.)   | 7ns or less   | 0.35 µs (Typ.)  | 3.5ns or less   |
| Maximum Continuous Input Range | 200A(10mV/A)<br>20A(100mV/A)   | 150A(20mV/A)<br>15A(200mV/A)   | 30Apeak   | 7A(50mV/A)<br>70A(500mV/A)  | 30Apeak   |
| Maximum Peak Current Value     | DC : 200A<br>AC : 140Arms  | DC : 150A<br>AC : 100Arms  | 50A   | DC : 70A<br>AC : 50Arms   | 50A   |
| Output Voltage Rate            | 100mV/A ; 10mV/A   | 200mV/A; 20mV/A  | 0.1V/A  | 500mV/A; 50mV/A   | 0.1V/A  |
| DC Amplitude Accuracy          | ±3% ±50 mA at 100 mV/A<br>(50 mA ~ 20A peak range)<br>±4% ±50 mA at 10 mV/A<br>(500 mA ~ 80A peak range)<br>±15% max at 10 mV/A<br>(80A peak ~ 150A peak range)<br>±20% max at 10mV/A<br>(150A peak ~ 200A peak range) | ±3% ±30 mA at 200 mV/A<br>(30 mA ~ 15 A peak range)<br>±4% ±300 mA at 20 mV/A<br>(300 mA ~ 80 A peak range)<br>±15% max at 20 mV/A<br>(80A peak ~ 150A peak range) | ±1.0%rdg±1mV<br>(0~30Arms/DC,<br>45~66Hz);±2.0%rdg<br>(30Arms~50A peak<br>/DC, 45~66Hz) | ±3% ±20 mA at 500 mV/A<br>(20 mA ~ 7A peak range)<br>±4% ±200 mA at 50 mV/A<br>(200 mA ~ 50 A peak range)<br>±15% max at 50 mV/A<br>(50A peak ~ 70A peak range) | ±1.0%rdg±1mV<br>(0~30Arms/DC,<br>45~66Hz);±2.0%rdg<br>(30Arms~50A peak<br>/DC, 45~66Hz) |
| Noise                          | —  | —  | 2.5mArms or less  | —   | 2.5mArms or less  |
| Rate Supply Voltage            | —  | —  | ±12V± 0.5V  | —   | ±12V± 0.5V  |
| Maximum Rated Power            | —  | —  | 5.6VA   | —   | 5.3VA   |
| Maximum Rated Voltage          | CAT III 300V/CAT II 600V   | CAT III 600V   | 300V, CAT I   | CAT III 600V  | 300V, CAT I   |

### CURRENT PROBE POWER SUPPLY

|                                   | GCP-206P                                 | GCP-425P                                 |
|-----------------------------------|--|--|
| Compatible Current Probe          | GCP-530/GCP-1030                         | GCP-530/GCP-1030                         |
| Number of Power Supply Connectors | 2  | 4  |
| Output Voltage                    | ±12V± 0.5V                               | ±12V± 0.5V                               |
| Rated Output Current              | ±600mA                                   | ±2.5A                                    |
| Rated Supply Voltage(50/60Hz)     | 110V/120V, 220V/240V AC±10%              | 100V~240V AC±10%                         |
| Maximum Rated Power               | 20VA                                     | 170VA                                    |
| Dimensions & Weight               | 73 (W)x110 (H)x186 (D) mm ; Approx.1.1kg | 80 (W)x119 (H)x200 (D) mm ; Approx.1.1kg |
| Accessories                       | Power cord, fuse                         | Power cord, fuse                         |

### HIGH-VOLTAGE DIFFERENTIAL PROBE

|   | GDP-025  | GDP-050   | GDP-100   |
|---|--|---|---|
| Probe Bandwidth                             | DC ~ 25MHz<br>(attenuation x50, x200) ;<br>DC ~ 15MHz(attenuation x20)                     | DC ~ 50MHz(attenuation<br>x200, x500, x1000) ;<br>DC ~ 25MHz(attenuation x100)              | DC ~ 100MHz(attenuation<br>x200, x500, x1000);<br>DC ~ 50MHz(attenuation x100)              |
| Attenuation                                 | x20, x50, x200   | x100, x200, x500, x1000   | x100, x200, x500, x1000   |
| Accuracy                                    | ±2%  | ±2%   | ±2%   |
| Voltage Input Range<br>(DC+AC peak to peak) | ≤140Vp-p for x 20,<br>≤350Vp-p for x 50,<br>≤1400Vp-p for x 200                            | ≤700Vp-p for x 100<br>≤1400Vp-p for x 200<br>≤3500Vp-p for x 500<br>≤7000Vp-p for x 1000    | ≤700Vp-p for x 100<br>≤1400Vp-p for x 200<br>≤3500Vp-p for x 500<br>≤7000Vp-p for x 1000    |
| Permitted Max Input Voltage                 | Maximum differential voltage:<br>Max voltage between input<br>terminal and ground: 600Vrms | Maximum differential voltage:<br>Max voltage between input<br>terminal and ground: 6500Vrms | Maximum differential voltage:<br>Max voltage between input<br>terminal and ground: 6500Vrms |
| Input Impedance                             | Differential:4MΩ/1.2pF ;<br>Between terminals and<br>ground: 2MΩ/2.3pF                     | Differential:54MΩ/1.2pF ;<br>Between terminals and<br>ground:27MΩ/2.3pF                     | Differential: 54MΩ/1.2pF ;<br>Between terminals and<br>ground: 27MΩ/2.3pF                   |
| Output                                      | ≤7.0V  | ≤7.0V   | ≤7.0V   |
| Output impedance                            | 50Ω  | 50Ω   | 50Ω   |
| Rise Time                                   | 14ns (x50, x200<br>attenuation) ;<br>23.4ns (x20 attenuation)                              | 7ns (x200, x500, x1000<br>attenuation) ;<br>14ns (x100 attenuation)                         | 3.5ns (x200, x500, x1000<br>attenuation) ;<br>7ns (x100 attenuation)                        |
| Rejection Rate on<br>Common Mode(CMRR)      | 60Hz>80dB, 100Hz>60dB,<br>1MHz>50dB  | 60Hz>80dB, 100Hz>60dB,<br>1MHz>50dB   | 60Hz>80dB, 100Hz>60dB,<br>1MHz>50dB   |
| Power Supply                                | External DC adapter  | External DC adapter   | External DC adapter   |
| Consumption                                 | Maximum 35mA (0.4Watt)   | Maximum 35mA (0.4Watt)  | Maximum 35mA (0.4Watt)  |

### DUAL-CHANNEL DIFFERENTIAL PROBE

|                                | GDP-040D  |
|--------------------------------|---|
| Channel                        | 2   |
| Bandwidth (-3dB)               | DC ~ 40MHz (x200)                               |
| Attenuation                    | 200 X   |
| Voltage Input Range            | 600Vpp Max. CAT III                             |
| Output                         | ≤±3V  |
| Maximum Input Voltage to Earth | 600Vpp for x200                                 |
| Typical CMRR                   | 80dB@60Hz ;<br>60dB@100Hz ;<br>50dB@1MHz        |
| Input Impedance                | Differential : 2MΩ//1.2pF,<br>Ground 1MΩ//2.4pF |
| Output Impedance               | 50Ω   |
| Rise Time                      | 8.75ns for x200                                 |
| Power Supply                   | 5V DC from<br>GDS-300/200 Series                |
| Accuracy                       | ±2%   |
| Dimension                      | 81.7(H) x 123.0(W) x<br>28.0(D) mm              |