

# High Performance Differential Probes

► P7350 • P7330 • P6330



Tektronix' proven expertise in probes brings you the highest fidelity in high-speed differential probing. The P7350, P7330, P6330 high BW differential probes offer excellent signal fidelity, meeting the needs of engineers in design & debug of technologies with very fast clock speeds and edge rates. They provide high-bandwidth, low circuit loading, low noise differential probing solutions for high-speed circuit designers.

## P7350

The P7350 improves usability with variable spacing and solder down capability, and a small form factor for ease of use on densely packed circuit boards with difficult-to-reach probe points. It employs the patented TekConnect™ Interface, which preserves signal integrity to 10 GHz and beyond to meet present and future bandwidth needs.

## P7330 and P6330

The P7330 and P6330 enable users to make time domain or frequency domain measurements on high bandwidth signals commonly found in digital IC designs, communication applications, and disk drive applications. The P7330 and P6330 provide high-bandwidth, low circuit loading, and low noise differential probing solutions. The small probe head geometry and assorted probe tip accessories allow these probes to easily accommodate manual probing of surface mount devices.

## ► Features & Benefits

<100 ps Risetime  
(P7350 Guaranteed)

5 GHz to 3.5 GHz Bandwidths  
(Typical)

Low Input Capacitance:

<0.3 pF Differential  
(P7350 Typical)

≥60 dB (1000:1) Common  
Mode Rejection Ratio  
(CMRR) at 1 MHz  
(P7330, P6330 Typical)

Small Probe Head Allows  
Easy Probing of SMDs

P7350, P7330 TekConnect™  
Interface

P6330 TEKPROBE II® BNC  
interface (connects to  
TEKPROBE II BNC interface  
on TDS series oscilloscopes.  
Use 1103 TEKPROBE®  
power supply to interface  
with other BNC instruments)

## ► Applications

Communications  
(Gigabit Ethernet,  
Fibre Channel, InfiniBand)

Semiconductor  
Characterization & Validation  
(PCI-Express, Serial ATA,  
IEEE 1394, USB 2.0,  
RAMBUS, DDR)

Disk Drive Design

COMPUTING

COMMUNICATIONS

VIDEO

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### ► Characteristics

|                               | P7350                           | P7330                           | P6330                           |
|-------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Rise Time                     | <100 ps<br>(guaranteed)         | <140 ps<br>(guaranteed)         | <140 ps<br>(guaranteed)         |
| Bandwidth                     | 5.0 GHz                         | 3.5 GHz                         | 3.5 GHz                         |
| Attenuation                   | 6.25X                           | 5X                              | 5X                              |
| Differential Input C          |                                 | <0.3 pF<br>(typical)            |                                 |
| Differential Input Resistance | 100 k $\Omega$                  | 100 k $\Omega$                  | 100 k $\Omega$                  |
| Differential Input Range      | $\pm 2.5$ V<br>(20 °C to 30 °C) | $\pm 2$ V<br>(20 °C to 30 °C)   | $\pm 2$ V<br>(20 °C to 30 °C)   |
| Common Mode Input Range       | +6.25 V to -5 V                 | +5 V to -4 V                    | +5 V to -4 V                    |
| Max Voltage (non-destruct)    | $\pm 25$ V<br>(DC plus peak AC) | $\pm 25$ V<br>(DC plus peak AC) | $\pm 25$ V<br>(DC plus peak AC) |
| CMRR                          | >45 dB at 1 MHz<br>(typical)    | >60 dB at 1 MHz<br>(typical)    | >60 dB at 1 MHz<br>(typical)    |
| Noise                         | Approx. 46 nV/root Hz           | Approx. 35 nV/root Hz           | Approx. 35 nV/root Hz           |
| Interface                     | TekConnect                      | TekConnect                      | TEKPROBE II BNC                 |
| Cable Length                  | 1.3 m                           | 1.3 m                           | 1.3 m                           |

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## ► Ordering Information

### P7350

5.0 GHz Differential Probe for TekConnect Interface.

**Includes:** See accessories table below.

### P7330

3.5 GHz Differential Probe for TekConnect Interface.

**Includes:** See accessories table below

### P6330

3.5 GHz Differential Probe for TEKPROBE® BNC Interface.

**Includes:** See accessories table below.

## Service

**Opt. C3** – Calibration Service 3 Years.

**Opt. C5** – Calibration Service 5 Years.

**Opt. D1** – Calibration Data Report.

**Opt. D3** – Calibration Data Report 3 Years (requires Option C3).

**Opt. D5** – Calibration Data Report 5 Years (requires Option C5).

**Opt. R3** – Repair Service 3 Years.

**Opt. R5** – Repair Service 5 Years.

## Recommended Accessories

**IEEE 1394 Breakout Connector** – Order 679-5027-00.

## Related Products

**1103** – TEKPROBE® II power supply for interfacing with other BNC instruments.

**80A03** – TekConnect probe interface module for TDS/CSA8000 series oscilloscopes.

## Power Plug Options for 1103

**A0** – North America power.

**A1** – Universal EURO power.

**A2** – United Kingdom power.

**A3** – Australia power.

**A4** – 240 V, North America power.

**A5** – Switzerland power.

## ► Accessories

|                                      | P7350       |          | P7330       |          | P6330       |          |
|--------------------------------------|-------------|----------|-------------|----------|-------------|----------|
|                                      | Part No.    | Quantity | Part No.    | Quantity | Part No.    | Quantity |
| Y Lead Adapter                       | 196-3434-00 | 2 each   | 196-3434-00 | 2 each   | 196-3434-00 | 2 each   |
| 3" Ground Lead                       | 196-3469-00 | 2 each   | 196-3469-00 | 2 each   | 196-3469-00 | 2 each   |
| IC Grabber (Pkg of 2)                | —           | —        | 013-0309-00 | 1 pkg    | 013-0309-00 | 1 pkg    |
| SMT KlipChip™ Adapter                | 206-0364-00 | 2 each   | 206-0364-00 | 2 each   | 206-0364-00 | 2 each   |
| TwinFoot™ Adapter (Pkg of 2)         | 016-1785-00 | 1 pkg    | 016-1785-00 | 1 pkg    | 016-1785-00 | 1 pkg    |
| Square Pin Adapter (Pkg of 4)        | 016-1884-00 | 1 pkg    | 016-1884-00 | 1 pkg    | 016-1884-00 | 1 pkg    |
| Plastic Accessory Box                | 006-7164-00 | 1        | 006-7164-00 | 1        | 006-7164-00 | 1        |
| Coding Color Marker Kit              | 016-1886-00 | 1        | —           | —        | —           | —        |
| Color Coding Clips                   | —           | —        | 016-1315-00 | 1 set    | 016-1315-00 | 1 set    |
| Variable Spacing Adapter (Pkg of 4)  | 016-1885-00 | 1 pkg    | 016-1885-00 | 1 pkg    | 016-1885-00 | 1 pkg    |
| Probe Carrying Case                  | 016-1879-00 | 1        | 016-1879-00 | 1        | 016-1879-00 | 1        |
| Instruction Manual                   | 071-1238-xx | 1        | 071-0758-xx | 1        | 071-0757-xx | 1        |
| Certificate of Traceable Calibration | —           | 1        | —           | 1        | —           | 1        |
| Anti-static Wrist Strap              | 006-3415-04 | 1        | 006-3415-04 | 1        | 006-3415-04 | 1        |
| Pin Jumper Lead                      | 196-3473-00 | 2        | 196-3473-00 | 2        | 196-3473-00 | 2        |
| Solder In Kit                        | 020-2505-00 | 1        | —           | —        | —           | —        |

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Our most up-to-date product information is available at:  
[www.tektronix.com](http://www.tektronix.com)

CE marking not applicable.  
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