High-performance Differential Probes

P7350 • P7330 • P6330 Datasheet



Features & Benefits

- <100 ps Rise Time (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

Applications

- Communications (Gigabit Ethernet, Fibre Channel, InfiniBand)
- Semiconductor Characterization and Validation
  - PCI Express
  - Serial ATA
  - IEEE 1394
  - USB 2.0 (The P7350 is not recommended for USB 2.0 compliance testing)
  - RAMBUS
  - DDR
- Disk Drive Design

Tektronix' proven expertise in probes brings you the highest fidelity in high-speed differential probing. The P7350, P7330, and P6330 high-bandwidth differential probes offer excellent signal fidelity, meeting the needs of engineers in design and 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.

Performance You Can Count On

Depend on Tektronix to provide you with performance you can count on. In addition to industry-leading service and support, this product comes backed by a one-year warranty as standard.

Tektronix®

Characteristics

Characteristic	P7350	P7330	P6330
Rise Time	<100 ps (guaranteed)	<140 ps (guaranteed)	<140 ps (guaranteed)
Bandwidth	5.0 GHz	3.5 GHz	3.5 GHz
Attenuation	6.25x	5x	5x
Differential Input C		<0.3 pF (typical)	
Differential Input Resistance	100 kΩ	100 kΩ	100 kΩ
Differential Input Range	±2.5 V (20 °C to 30 °C)	±2 V (20 °C to 30 °C)	±2 V (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 (nondestruct)	±25 V (DC + peak AC)	±25 V (DC + peak AC)	±25 V (DC + peak AC)
CMRR	>45 dB at 1 MHz (typical)	>60 dB at 1 MHz (typical)	>60 dB at 1 MHz (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

Ordering Information

P7350
5.0 GHz Differential Probe for TekConnect Interface.
Supports CSA/TDS8200, CSA/TDS8000, TDS/CSA7000/B, and TDS6000/B/C Series.*1

P7330
3.5 GHz Differential Probe for TekConnect Interface.
Supports CSA/TDS8200, CSA/TDS8000, TDS/CSA7000/B, and TDS6000/B/C Series.*1

P6330
3.5 GHz Differential Probe for TEKPROBE® BNC Interface.
Supports TDS/CSA7000/B, TDS6000/B/C, TDS700, TDS600 Series.*2

All Include: One-year warranty, plus see Accessories table below.

*1 CSA/TDS8200, CSA/TDS8000 Series requires the use of the 80A03 TekConnect Interface Adapter.

*2 TDS6000/B/C or TekConnect TDS7000/B Series oscilloscopes require a TCA-BNC adapter.

Accessories

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

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 (with Opt. C3).
Opt. D5 – Calibration Data Report 5 Years (with Opt. C5).
Opt. G3 – Complete Care 3 Years (includes loaner, scheduled calibration and more). P7330, P7350 only
Opt. G5 – Complete Care 5 Years (includes loaner, scheduled calibration and more). P7330, P7350 only
Opt. R3 – Repair Service 3 Years.
Opt. R5 – Repair Service 5 Years.
Opt. SILV900 – Standard Warranty Extended to 5 Years. P6330 only

Recommended Accessories
IEEE 1394 Breakout Connector – Order 679-5027-xx.
IC Grabber – Order 013-0309-xx (Pkg of 2).

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.

CE Marking Not Applicable.

Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.

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For Further Information. Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit **www.tektronix.com**

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