High-Performance Differential Probes

P7350 • P7330 • P6330 Datasheet

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.

Key performance specifications

- <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)

Key features

- High-bandwidth, low-noise differential probing
- 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)
  - MIPI® D-PHY
  - DDR
- Disk drive design

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.

Specifications

All specifications apply to all models unless noted otherwise.

Model overview

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)	<0.3 pF (typical)	<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)	±15 V (DC + peak AC)	±15 V (DC + peak AC)	±15 V (DC + peak AC)
CMRR	>55 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

Models

P7350	5.0 GHz Differential Probe for TekConnect Interface. Supports DSA8300, MSO/DPO70000C/D/DX, CSA/TDS8200, CSA/TDS8000, CSA/TDS7000/B, and TDS6000/B/C Series. [1]
P7330	3.5 GHz Differential Probe for TekConnect Interface. Supports DSA8300, MSO/DPO70000C/D/DX, CSA/TDS8200, CSA/TDS8000, CSA/TDS7000/B, and TDS6000/B/C Series. [1]
P6330	3.5 GHz Differential Probe for TEKPROBE II® BNC Interface. Supports MSO/DPO70000C/D/DX, CSA/TDS7000/B, TDS6000/B/C, TDS700, TDS600 Series. [2]

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

Standard accessories

	P7350		P7330		P6330	
Accessory	**Part Number**	**Quantity**	**Part Number**	**Quantity**	**Part Number**	**Quantity**
Y Lead Adapter	196-3434-xx	2 each	196-3434-xx	2 each	196-3434-xx	2 each
3 in. Ground Lead (Pkg of 2)	196-3469-xx	1 pkg	196-3469-xx	1 pkg	196-3469-xx	1 pkg
SMT KlipChip™ Adapter	206-0569-xx	2 each	206-0569-xx	2 each	206-0569-xx	2 each
TwinFoot™ Adapter (Pkg of 4)	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 set	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	016-1952-xx	1	016-1952-xx	1	016-1952-xx	1
Instruction Manual	071-1238-xx	1	071-0758-xx	1	071-0757-xx	1
Certificate of Traceable Calibration and Calibration Data Report	-	1	-	1	-	1
Antistatic Wrist Strap	006-3415-xx	1	006-3415-xx	1	006-3415-xx	1
Pin Jumper Lead	196-3473-xx	2	196-3473-xx	2	196-3473-xx	2
Solder In Kit	020-2505-xx	1	-	-	-	-

Recommended accessories

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

1 DSA8300, 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.

Service options

Opt. C3	Calibration Service 3 Years
Opt. C5	Calibration Service 5 Years
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 and more). P7330, P7350 only
Opt. G5	Complete Care 5 Years (includes loaner and more). P7330, P7350 only
Opt. R3	Repair Service 3 Years (including warranty)
Opt. R5	Repair Service 5 Years (including warranty)

Related products

1103	TEKPROBE® II power supply for interfacing with other BNC instruments
80A03	TekConnect probe interface module for DSA8300, TDS/CSA8000 Series oscilloscopes

Power plug options for the 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
A6	Japan power
A99	No power cord
A10	China power
A11	India power
A12	Brazil 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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