Tektronix Logic Analyzer Probes

P6410 • P6419 • P6434 • P6450 Data Sheet

Features & Benefits

- <0.7 pF Total Capacitive Loading Minimizes Intrusion on Circuits
- 20 kΩ Input Resistance
- 6.5 V_{p-p} Dynamic Range Supports a Broad Range of Logic Families
- General Purpose Probing Allows Flexible Attachment to Industry Standard Connections
- Connectorless Probing System Eliminates Need For Onboard Connectors

Applications

- Hardware Debug and Verification
- Processor/Bus Debug and Verification
- Embedded Software Integration, Debug, and Verification

Leading Probing Solutions for Real-time Digital Systems Analysis

No test and measurement solution is complete without probing and the consideration of its impact on your system and your measurement time. With the industry's lowest probe loading, the P6400 Series logic analyzer probes protect the integrity of your signal – minimizing the impact on your design. The P6400 Series logic analyzer probes when used with the TLA5000B Series logic analyzers make sophisticated logic analysis available at an affordable price. Select from a variety of attachment mechanisms, including the high-density D-Max® Probing Technology that eliminates the need for onboard connectors.

- For applications where circuit board space is limited, the high-density P6450 offers the smallest available footprint and a quick connection mechanism.
- With low loading capacitance, the P6400 Series can accurately acquire signals with faster edges without distorting the signal.
- Flexible general-purpose probing, with support for 0.100 in. and 2 mm pin spacing, low input capacitance, and accessories for connecting to many industry standard connections.

Tektronix®

Characteristics

Characteristic	P6410	P6419	P6434	P6450
Probe Type	Single-ended Data Single-ended Clock (General Purpose)	Single-ended Data Single-ended Clock (Compression 17-channel)	Single-ended Data Single-ended Clock (Mictor 34-channel)	Single-ended Data Single-ended Clock (D-Max Probing Technology)
Number of Channels	17	17	34	34
Recommended Usage for:	Most general-purpose applications	Applications requiring good signal density and quick reliable attachment	Applications requiring many channels to be quickly connected in a small footprint	Applications requiring many channels to be quickly connected in a small footprint
Attachment to Target System	Fits both 0.100 in. and 2 mm square pin configurations	Compression Elastomer	Amp Mictor 34 Channel Connector	D-Max probing technology compression cLGA
Probe Loading AC/DC	2 pF/20 kΩ to 0 V (TLA5000)	< 0.7 pF/20 kΩ to 0 V (TLA5000)	2 pF/20 kΩ to 0 V (TLA5000)	<0.7 pF/20 kΩ to 0 V (TLA5000)
	<2 pF/20 kΩ to 2.2 V (TLA600, TLA7N/P/Qx)	< 0.7 pF/20 kΩ to 2.2 V (TLA600, TLA7N/P/Qx)	2 pF/20 kΩ to 2.2 V (TLA600, TLA7N/P/Qx)	< 0.7 pF/20 kΩ to 2.2 V (TLA600, TLA7N/P/Qx)
Input Range	-5 V to 8 V			
Max Voltage (nondestruct)	±15 V			
Cable Length	1.8 m (6 ft.)			

Ordering Information

P6410
17-channel general-purpose Probe with Single-ended Data/Clock with Separable Podlets and Accessories

Includes: Podlet holders, IC Grabbers, ground leads, ground tips, extension ground tips, probe labels, probe instruction manual.

P6419
17-channel High-density Compression Probe, with Single-ended Data/Clock and Accessories

Includes: Nut bars, elastomer holder (thin PCBs), elastomer holder (thick PCBs), probe labels, probe instruction manual.

P6434
34-channel High-density Mictor Probe with Single-ended Data/Clock and Accessories

Includes: Latch housing assembly (edge-mount), latch housing assembly (vertical), probe labels, probe label instructions, probe instruction manual.

P6450
34-channel High-density D-Max Probing Technology Probe with Single-ended Data/Clock and Accessories

Includes: Probe Retention Kit for D-Max Probing Technology, probe labels, probe instruction manual.

Accessories

Description	P6410		P6419*1		P6434		P6450	
	Qty Per Probe	Part Number	Qty Per Probe	Part Number	Qty Per Probe	Part Number	Qty Per Probe	Part Number
Nut Bar (used on <0.093 in. thick PCB), Bag of 2	–	–	1	020-2453-00	–	–	–	–
Elastomer Holder Assembly, Thin (used on <0.093 in. thick PCB), Bag of 2	–	–	1	020-2451-00	–	–	–	–
Elastomer Holder Assembly, Thick (used on >0.093 in. thick PCB), Bag of 2	–	–	1	020-2452-00	–	–	–	–
Probe Retention Kit for D-Max Probing Technology	-	-	-	-	-	-	1	020-2908-00
Sheet of Probe Labels	1	334-9979-00	1	335-1007-00	1	334-9381-00	1	335-1990-00
1 Latch Housing Assembly, Edge-mount	–	–	–	–	1	105-1088-00	–	–
1 Latch Housing Assembly, Vertical	–	–	–	–	1	105-1089-00	–	–
High-resistance Adapter for use with General Purpose Probes*2	1	TLAHRA	–	–	–	–	–	–
Optional								
One-to-Two Adapter	1 each	013-0280-00	–	–	–	–	–	–
1 each – AMP Mictor Connector, Surface-mount	–	–	–	–	1	131-6134-01	–	–
21 each – AMP Mictor Connector, Surface-mount	–	–	–	–	1	020-2228-00	–	–
Mictor-on-PCB to P6419 Probe Adapter	–	–	1	020-2457-00	–	–	–	–
Compression-on-PCB to Mictor Adapter, 17 channel	–	–	1	020-2455-00	–	–	–	–
Compression-on-PCB to Mictor Adapter, 34 channel	–	–	1	020-2456-00	1	020-2456-00	–	–

*1 Recommend PEM KFS-256 or equivalent for >0.093 in. thick PCB.

*2 Provides 1 MΩ input resistance for use in low-power applications.

Service Programs

Customers who choose a Tektronix product receive a support partnership focused on making the deployment and operation of their products successful. Tektronix support teams are committed to providing rapid response. A broad range of flexible services is available at the time of product purchase to meet customer service needs.

Option	Description
P6410 C3 P6450 C3	Calibration Service 3 years
P6410 C5 P6450 C5	Calibration Service 5 years
P6410 R3 P6450 R3	Repair Service 3 years (incl. Warranty)
P6410 R5 P6450 R5	Repair Service 5 years (incl. Warranty)
P6410 CA1 P6450 CA1	Provides a single calibration event or coverage for the designated calibration interval, whichever comes first.
P6410-R1PW P6450-R1PW	Repair Service Coverage 1 year Post-warranty
P6410-R2PW P6450-R2PW	Repair Service Coverage 2 years Post-warranty
P6410-R3DW P6450-R3DW	Repair Service Coverage 3 years (incl. Product Warranty Period). 3-year period starts at time of instrument purchase.
P6410-R5DW P6450-R5DW	Repair Service Coverage 5 years (incl. Product Warranty Period). 5-year period starts at time of instrument purchase.

CE

ISO 9001

Product(s) are manufactured in ISO registered facilities.

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Updated 30 October 2008

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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29 May 2009 52W-17703-3

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