

1.5 GHz Active Probe

TAP1500 Data Sheet



Features & Benefits

- Outstanding Electrical Performance
 - ≥ 1.5 GHz Probe Bandwidth
 - < 267 ps Rise Time
 - ≤ 1 pF Input Capacitance
 - $1\text{ M}\Omega$ Input Resistance
 - -8 V to $+8\text{ V}$ Input Dynamic Range
 - -10 V to $+10\text{ VDC}$ Input Offset Range
- Versatile Mechanical Performance
 - Small Compact Probe Head for Probing Small Geometry Circuit Elements
 - DUT Attachment Accessories Enable Connection to SMDs as Small as 0.5 mm Pitch
 - Robust Design for Reliability

- Easy to Use
 - Connects Directly to DPO7000 and DPO/MSO4000 Series Oscilloscopes Using the TekVPI™ Probe Interface
 - Provides Automatic Units Scaling and Readout on the Oscilloscope Display
 - Easy Access to Oscilloscope Probe Menu Display for Probe Status/Diagnostic Information, and to Control Probe DC Offset

Applications

- High-speed Digital Systems Design
- Component Design and Characterization
- Manufacturing Engineering and Test
- Educational Research
- Signals with Voltage Swings up to 16 V_{p-p}

TAP1500 Single-ended Active FET Probe provides excellent high-speed electrical and mechanical performance required for today's digital system designs. Specifically designed for use and direct connection to the TekVPI™ probe interface used on Tektronix' new DPO7000 and DPO/MSO4000 Series Oscilloscopes, the TAP1500 Active FET probe achieves high-speed signal acquisition and measurement fidelity by solving three traditional problems:

- Lower DUT loading effects with ≤ 1 pF input capacitance and $1\text{ M}\Omega$ input resistance
- Versatile DUT connectivity for attaching to small SMDs
- Preserves oscilloscope bandwidth at the probe tip for DPO7000 and DPO/MSO4000 Series Oscilloscope models, up to 1 GHz

Characteristics

Characteristic	Description
Bandwidth (probe only)	≥ 1.5 GHz
Attenuation (probe only)	10x $\pm 2\%$
Rise Time (probe only)	≤ 267 ps
Input Capacitance	< 1 pF
Input Resistance	1 M Ω
Linear Dynamic Range	± 8 V (16 V _{p-p})
Input Offset Range	± 10 V
Max Input Voltage (nondestruct)	± 15 V (DC + peak AC)
Propagation Delay	5.3 ns

Physical Characteristics

Probe Head Size	mm	in.
Height	11.25	0.44
Width	5.1	0.20
Length	60.4	2.38
Other Dimensions		
Cable Length	1300	51
Weight	kg	lb.
Net	0.45	1

Power Requirements

TAP1500 is powered directly by the DPO7000 and DPO/MSO4000 Series Oscilloscopes using TekVPI probe interface.

Recommended Oscilloscopes

DPO7000 and DPO/MSO4000 Series Oscilloscopes with TekVPI™ probe interface.

Environmental

Characteristic	Description
Temperature	
Operating	0 °C to +50 °C
Nonoperating	-40 °C to +71 °C
Humidity	
Operating	5% to 95% Relative Humidity (RH) at up to +30 °C; 5% to 85% RH above +30 °C up to +50 °C; noncondensing
Nonoperating	5% to 95% Relative Humidity (RH) at up to +30 °C; 5% to 85% RH above +30 °C up to +75 °C; noncondensing
Altitude	
Operating	Up to 3,000 m (10,000 ft.)
Nonoperating	Up to 15,240 m (50,000 ft.)
Regulatory	
Compliance Labeling	WEEE (European Union)

Standard Warranty

One year parts and labor.

Ordering Information

TAP1500

1.5 GHz Active Probe

TAP1500X2

1.5 GHz Active Probe. Discounted two TAP1500 probe package.

Standard Accessories Included

Description	Qty with TAP1500 or TAP1500X2	Reorder Part Number	Reorder Qty
Low-inductance 1 in. Z-Ground Lead	2 each	196-3439-xx	1 each (Pkg of 10)
3 in. Ground Lead	2 each	196-3437-xx	1 each (Pkg of 2)
6 in. Ground Lead	2 each	196-3436-xx	1 each (Pkg of 2)
Y-Lead Adapter	2 each	196-3463-xx	1 each (Pkg of 2)
Color-coding Clips	2 each of 5 colors	016-1315-xx	2 each of 5 colors
Solderable Probe Tips	10 each	131-5638-xx	1 each (Pkg of 10)
Micro CKT Test Tip	4 each	206-0569-xx	1 each
Right Angle Square Pin Adapter	2 each	214-4227-xx	1 each
100 mm Square Pin Ground Adapter	2 each	131-5777-xx	1 each
User Manual*1	1 each	071-1809-xx English or 071-1810-xx Japanese or 071-1811-xx Simplified Chinese	1 each
Nylon Carrying Case*2	1 each	016-1952-xx	1 each

*1 Manual language must be specified when ordering.

*2 The TAP1500X2 does not include individual probe cases. Users who desire the individual probe case should order the TAP1500 probe.

Options

Option	Description
Manual Options	
Opt. L5	Japanese instruction manual
Opt. L7	Simplified Chinese instruction manual
Service Options	
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. R3	Repair Service 3 Years
Opt. R5	Repair Service 5 Years

Recommended Accessories

Description	Package Qty	Reorder Part Number
SMT KlipChip™ Adapter	20	SMG50
IC Micro-grabber	2	013-0309-xx
Probe Case	1	016-1952-xx



Product(s) are manufactured in ISO registered facilities.

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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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