

1.5 GHz Active Probe

TAP1500 Datasheet



TAP1500 Single-ended Active FET Probe provides excellent high-speed electrical and mechanical performance required for today's digital system designs.

Key features

- 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 oscilloscopes with 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
 - Remote GPIB/USB probe control through the oscilloscope
- Applications
 - High-speed Digital Systems Design
 - Component Design and Characterization
 - Manufacturing Engineering and Test
 - Educational Research
 - Signals with Voltage Swings up to 16 V

1.5 GHz active probes for TekVPI™ probe interface

- 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 instrument bandwidth at the probe tip for ≤ 1 GHz oscilloscopes

Specifications

All specifications apply to all models unless noted otherwise.

Warranted electrical characteristics

Attenuation (probe only) 10X \pm 2%

Typical characteristics

Bandwidth (probe only) \geq 1.5 GHz
Rise time (probe only) <267 ps
Input capacitance <1 pF
Input resistance 1 M Ω
Linearity \pm 8 V (16 V_{p-p})
Input offset range \pm 10 V
Maximum non-destructive input voltage \pm 15 V (DC + peak AC)
Propagation delay 5.3 ns

Physical characteristics

Probe head size
Height 11.25 mm (0.44 in)
Width 5.1 mm (0.20 in)
Length 60.4 mm (2.39 in)
Other dimensions
Cable length 1300 mm (51 in)
Weight
Net 0.45 kg (1.0 lbs)

Power requirements

The probe is powered directly by oscilloscopes with the TekVPI probe interface.

EMC, environment, and safety

Temperature

Operating 0 °C to +50 ° (+32 °F to 122 °F)
Nonoperating -40 °C to +71 °C (-40 °F to 160 °F)

Humidity

Operating 5% to 95% Relative Humidity up to +30 °C (+86 °F) 5% to 85% Relative Humidity at 30 °C to +50 °C (+86 °F to +122 °F) noncondensing
Nonoperating 5% to 95% Relative Humidity up to +30 °C (+86 °F) 5% to 85% Relative Humidity at 30 °C to +75 °C (+86 °F to +167 °F) noncondensing

Altitude

Operating Up to 4,400 m (14,436 ft)
Nonoperating Up to 12,192 m (40,000 ft)

Regulatory

Compliance labeling

WEEE (European Union)

Ordering information

TAP1500 models

| | |
|-----------|--|
| TAP1500 | 1.5 GHz Active Probe |
| TAP1500X2 | 1.5 GHz Active Probe. Discounted two TAP1500 probe package |

Standard accessories

Standard accessories

| Description | Quantity with TAP1500 or TAP1500X2 | Reorder part number | Reorder quantity |
|------------------------------------|------------------------------------|---|--------------------|
| Low-inductance 1 in. Z-Ground lead | 2 each | 196-3438-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 |

Recommended oscilloscopes

Oscilloscopes with the TekVPI™ probe interface.

Warranty

One-year warranty covering all parts and labor.

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

Manual options

| | |
|---------|---------------------------|
| Opt. L5 | Japanese manual |
| Opt. L7 | Simplified Chinese 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 (including warranty) |
| Opt. R5 | Repair Service 5 Years (including warranty) |
| Opt. SILV600 | Standard warranty extended to 5 years |

Recommended accessories

| | |
|-------------|-------------------------------------|
| 013-0309-xx | IC Micro-grabber, Qty 2 |
| 006-3415-xx | Antistatic wrist strap |
| 067-1707-xx | TekVPI calibration fixture (for PV) |

CE Marking Not Applicable.



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

ASEAN / Australasia (65) 6356 3900
Belgium 00800 2255 4835*
Central East Europe and the Baltics +41 52 675 3777
Finland +41 52 675 3777
Hong Kong 400 820 5835
Japan 81 (3) 6714 3010
Middle East, Asia, and North Africa +41 52 675 3777
People's Republic of China 400 820 5835
Republic of Korea 001 800 8255 2835
Spain 00800 2255 4835*
Taiwan 886 (2) 2722 9622

Austria 00800 2255 4835*
Brazil +55 (11) 3759 7627
Central Europe & Greece +41 52 675 3777
France 00800 2255 4835*
India 000 800 650 1835
Luxembourg +41 52 675 3777
The Netherlands 00800 2255 4835*
Poland +41 52 675 3777
Russia & CIS +7 (495) 6647564
Sweden 00800 2255 4835*
United Kingdom & Ireland 00800 2255 4835*

Balkans, Israel, South Africa and other ISE Countries +41 52 675 3777
Canada 1 800 833 9200
Denmark +45 80 88 1401
Germany 00800 2255 4835*
Italy 00800 2255 4835*
Mexico, Central/South America & Caribbean 52 (55) 56 04 50 90
Norway 800 16098
Portugal 80 08 12370
South Africa +41 52 675 3777
Switzerland 00800 2255 4835*
USA 1 800 833 9200

* European toll-free number. If not accessible, call: +41 52 675 3777

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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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