



ABN 43 064 478 842

231 Osborne Avenue Clayton South, VIC 3169  
PO Box 1548, Clayton South, VIC 3169  
t 03 9265 7400 f 03 9558 0875  
freecall 1800 680 680  
www.tmgtestequipment.com.au

## Test & Measurement

- > sales
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## Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

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Product Lifecycle Management System

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# Active Probes

► TAP2500 • TAP3500



Selecting the right probe for your application is key to attaining the best signal fidelity in your measurements. Active probes provide truer signal reproduction and fidelity for high frequency measurements. With our ultra-low input capacitance and unique interface, the TAP2500 and TAP3500 Single-ended Active FET probes provide 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 the DPO7000 and DPO4000 Series oscilloscopes, the TAP2500 and TAP3500 Active FET probes achieve high-speed signal acquisition and measurement fidelity by solving three traditional problems:

- Lower DUT loading effects with  $\leq 0.8$  pF input capacitance and 40 k $\Omega$  input resistance
- Versatile DUT connectivity for attaching to small SMDs
- Preserves oscilloscope bandwidth at the probe tip for DPO7000 and DPO4000 Series Oscilloscope models up to 3.5 GHz

## ► Characteristics

- Bandwidth (probe only)** –  $\geq 2.5$  GHz (TAP2500),  $\geq 3.5$  GHz (TAP3500).
- Attenuation (probe only)** – 10:1.
- Rise Time (probe only)** –  $< 140$  ps (TAP2500),  $< 130$  ps (TAP3500).
- Input Capacitance** –  $\leq 0.8$  pF.
- Input Resistance** – 40 k $\Omega$ .
- Input Dynamic Range** –  $-4$  V to  $+4$  V.
- Input Offset Range** –  $-10$  V to  $+10$  V.
- Max Input Voltage (non-destruct)** –  $\pm 30$  V (DC + pkAC).
- Propagation Delay** – 5.3 ns.

## Physical Characteristics

Dimensions	mm	in.
Width	7.6	0.30
Height	7.6	0.30
Depth	57.2	2.25
Cable Length	1300	51
Weight	kg	lbs.
Net	0.091	0.2 (probe only, using ME lab scale)

## Power Requirements

TAP2500 and TAP3500 are powered directly by the DPO7000 and DPO4000 Series Oscilloscopes using TekVPI probe interface.

## Recommended Oscilloscopes

DPO7000 and DPO4000 Series Oscilloscopes with TekVPI probe interface.

## ► Features & Benefits

- Outstanding Electrical Performance
  - High Probe Bandwidth
  - Fast Probe Rise Time
  - Excellent Signal Fidelity
  - $\leq 0.8$  pF Input Capacitance
  - 40 k $\Omega$  Input Resistance
  - $-4$  V to  $+4$  V Input Dynamic Range
  - $-10$  V to  $+10$  V DC Input Offset Range
  - $\pm 30$  V (DC + pkAC) Max Input Voltage (Non-Destruct)

## 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 DPO4000 Series Oscilloscopes Using the New TekVPI™ Probe Interface
- Provides Automatic Units Scaling and Readout on the Oscilloscopes Display
- Easy Access to Oscilloscope Probe Menu Display for Probe Status/Diagnostic Information and to Control Probe DC Offset

## ► Applications

- Verification, Debug and Characterization of High-speed Designs
- Signal Integrity, Jitter and Timing Analysis
- Manufacturing Engineering and Test
- Signals with Voltage Swings Up to 8 V<sub>pk-pk</sub>

## Active Probes

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## ► Ordering Information

### TAP2500

2.5 GHz Active Probe.

### TAP3500

3.5 GHz Active Probe.

Description	Quantity with TAP2500 and TAP3500	Reorder Part Number (Quantity)
Y-Lead Adapter (2 each) and 3-inch ground lead (3 each)	1 set	196-3456-xx (1 set)
SMT KlipChip™ Adapter	2 each	206-0364-xx (1 ea)
Customizable Ground Lead (set of 5)	1 set	196-3482-xx (1 set)
Color Band Kit (5 colored pairs)	1 set	016-1315-xx (1 set)
Pogo Pin Ground (set of 10)	1 set	016-1772-10 (1 set)
Square Pin Socket (set of 10)	1 set	016-1773-10 (1 set)
Push-in Probe Tip (set of 10)	1 set	131-5638-11 (1 set)
Right-angle Adapter (set of 10)	1 set	016-1774-xx (1 set)
SureToe™ Adapter (set of 4)	1 set	131-6254-xx (1 set)
Antistatic Wrist Strap	1 each	006-3415-xx (1 ea)
Nylon Carrying Case	1 each	016-1952-xx (1 ea)
Plastic Accessory Case	1 each	006-7164-00 (1 ea)
Instruction Manual	1 each	071-1836-xx (1 ea)

### Environmental

#### Temperature –

Operating: 0° C to +50° C.

Non-operating: –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; non-condensing.

Non-operating: 5% to 95% Relative Humidity (RH) at up to +30 °C; 5% to 85% RH above +30 °C up to +75 °C; non-condensing.

#### Altitude –

Operating: Up to 4,400 m (15,000 feet).

Non-operating: Up to 12,192 m (40,000 feet).

### Regulatory

**Emissions Compliance** – EN 55011, Class A.

#### Compliance Labeling –

C-Tick (Australia/New Zealand).

CE (European Union).

WEEE (European Union).

### Manual Language Options

**Opt. L5** – Japanese instruction manual.

**Opt. L7** – Simplified Chinese instruction manual.

### Optional Accessories

Description	Package Quantity	Ordering Part Number
50 mil pitch (.050 in.) IC Adapter	12	SF501
25 mil pitch (.025 in.) IC Adapter	12	SF502
0.5 mm IC Adapter	12	SF503
IC Micro Grabber	2	013-0309-xx
SMA-to-Probe Tip Adapter	1	015-0678-xx
TekVPI Calibration Fixture (for PV)	1	067-1701-xx

### 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.

**Opt. CA1** – Single calibration event or coverage  
for the designated calibration interval, whichever  
comes first.

## Contact Tektronix:

ASEAN / Australasia (65) 6356 3900

Austria +41 52 675 3777

Balkan, Israel, South Africa and other ISE Countries +41 52 675 3777

Belgium 07 81 60166

Brazil & South America (11) 40669400

Canada 1 (800) 661-5625

Central East Europe, Ukraine and the Baltics +41 52 675 3777

Central Europe & Greece +41 52 675 3777

Denmark +45 80 88 1401

Finland +41 52 675 3777

France +33 (0) 1 69 86 81 81

Germany +49 (221) 94 77 400

Hong Kong (852) 2585-6688

India (91) 80-22275577

Italy +39 (02) 25086 1

Japan 81 (3) 6714-3010

Luxembourg +44 (0) 1344 392400

Mexico, Central America & Caribbean 52 (55) 5424700

Middle East, Asia and North Africa +41 52 675 3777

The Netherlands 090 02 021797

Norway 800 16098

People's Republic of China 86 (10) 6235 1230

Poland +41 52 675 3777

Portugal 80 08 12370

Republic of Korea 82 (2) 528-5299

Russia & CIS +7 (495) 7484900

South Africa +27 11 254 8360

Spain (+34) 901 988 054

Sweden 020 08 80371

Switzerland +41 52 675 3777

Taiwan 886 (2) 2722-9622

United Kingdom & Eire +44 (0) 1344 392400

USA 1 (800) 426-2200

For other areas contact Tektronix, Inc. at: 1 (503) 627-7111

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