

Maximize your instrument



Tektronix Oscilloscope Accessories Selection Guide

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Unmatched Performance – Customized by You

Tektronix oscilloscope software, probes and accessories allow you to adapt your oscilloscope to your specific application needs and environment.

Anytime, Anywhere Assistance

To help keep you up-to-date with the latest technology and application information from Tektronix, we offer a comprehensive, constantly expanding collection of technical literature, all available free of charge.

XYZs of Oscilloscopes and ABCs of Probes primers offer a better understanding of the basics of these solutions.

Our technical briefs, application notes and troubleshooting tips will help ensure you get the most out of your equipment.

To select the right probe for your specific application, please request the probe selection CD from your local Tektronix representative, or visit www.tektronix.com/accessories.



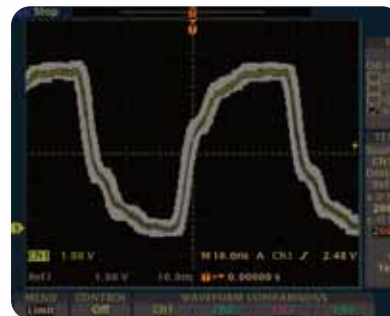
Accessories for TDS3000B, TPS2000, TDS2000 and TDS1000 Series Oscilloscopes

Brilliantly Engineered. Irresistibly Priced.

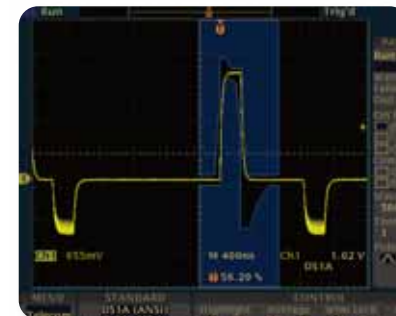
TDS3000B Series Recommended Accessories and Options

TDS3GV Communications Module	<p> GPIB, VGA and RS-232 interfaces. Includes TDSPCS1 OpenChoice® software. </p>
TDS3AAM Advanced Analysis Module	<p> Adds extended math capability, arbitrary math expressions, measurement statistics and additional automated measurements. </p>
TDS3LIM Limit Testing Module	<p> Offers fast, accurate Go/No Go verification that tested circuits are operating within intended parameters. </p>
TDS3TMT Telecommunications Module	<p> Pass/Fail compliance of ITU-T G.7803 Mask Testing and ANSI T1.102 standards, custom mask editing and more. </p>
TDS3VID Extended Video Module	<p> Adds Video QuickMenu, Autoset, Editing Holdoff, Line Count Trigger, Video Picture mode, Vectorscope mode, HDTV format triggering, graticules and more. </p>
TDS3SDI 601 Serial Digital Video Module	<p> Identify and analyze ITU-R BT.601 video Video Module signals, video picture mode with bright line select, Vectorscope mode, HDTV format triggering and more. </p>
TDS3BATB Battery Pack	<p> Up to 3 hours of continuous operation without line power. </p>
TDS3CHG	<p> Fast charger for battery pack. </p>
TDS3PRT Plug-in Printer	<p> Easy, portable documentation capability, even when operating on battery power. </p>
AC3000	<p> Soft carrying case. </p>
HCTEK321 [†]	<p> Hard carrying case. </p>
RM3000	<p> Rackmount kit. </p>

[†] Requires AC3000 for complete transit protection.



► TDS3LIM Limit Testing Module.



► TDS3TMT Telecom Mask Testing Module.



► TDS3VID Extended Video Module.



► TDS3SDI 601 Serial Digital Video Module.

Recommended Oscilloscope Software for Windows PC

WaveStar™ Software	<p> Offers live remote waveform reproduction, active remote control of oscilloscope-specific settings, advanced measurements and power harmonics analysis. </p>
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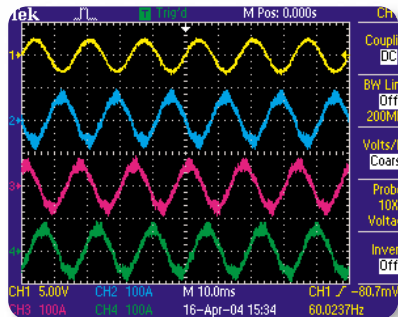
TPS2000 Series Recommended Accessories

TPS2PBNB Power Bundle	Includes (4) P5120 passive, high-voltage probes and TPS2PWR1 power measurement and analysis software.
TPS2PWR1 Power Software	Offers instantaneous power waveform analysis, waveform analysis, harmonics analysis, switching loss, phase angles, dv/dt and di/dt cursors.
TPSBAT	Battery pack for up to 4 hours battery operation. Optional second battery offers hot-swappability for 8+ hours continuous battery operation.
TPSCHG	External battery charger.
AC2100	Soft carrying case.
HCTEK321 ^{*1}	Hard carrying case.

^{*1} Requires AC2100 for complete transit protection.

TDS2000 and TDS1000 Series Recommended Accessories

TDS2MEM Storage and Communications Module	Provides mass storage support through CompactFlash. Provides communication with other instruments, peripherals and systems through RS-232, Centronics. Includes CompactFlash to USB memory card reader, RS-232 cable and TDSPCS1 OpenChoice [®] software.
TDS2CMAX Communications Module	Provides communication with other instruments, peripherals and systems (through RS-232 Serial, GPIB instrument control, Centronics-type parallel). Includes RS-232 cable and TDSPCS1 OpenChoice [®] software.
AC2100	Soft carrying case.
HCTEK321 ^{*1}	Hard carrying case.
RM2000	Rackmount kit.



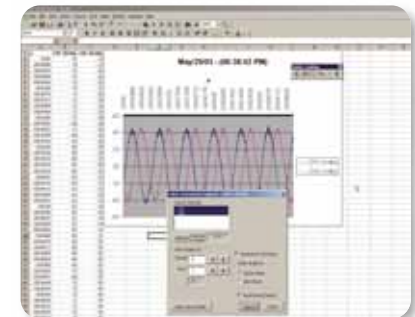
► Power Control Circuit on 4-ch. TPS2024.



► AC2100 Soft Carrying Case.



► TDS2MEM Storage Memory and Communication Module.



► OpenChoice[®] Software.

Accessories for TDS5000B, TDS6000, TDS/CSA7000B, CSA/TDS8200 Series Oscilloscopes

Superior Measurement Fidelity. Powerful Analysis. Uncompromised Usability.

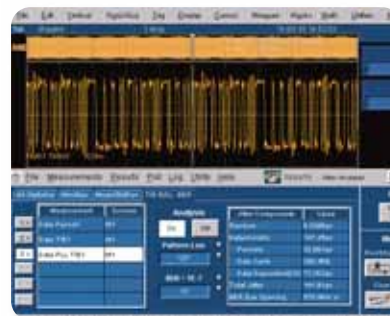
Recommended Oscilloscope Software

Transform your TDS5000B, TDS6000, TDS/CSA7000B or CSA/TDS8200 Series oscilloscope into a highly specialized analysis tool for jitter and timing analysis, communication standards compliance testing, disk drive measurements, video measurements, power measurements, and much more.

Oscilloscope Software

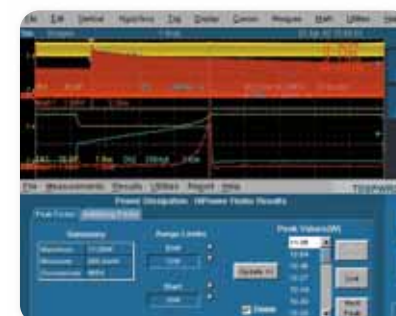
TDSJIT3	Jitter and Timing Analysis
TDSPWR3	Power Measurement and Analysis
TDSRT-Eye	Serial Data Compliance and Analysis
TDSET3	Ethernet Compliance Testing
TDSDVI	DVI Compliance Testing
TDSUSB2	USB 2.0 Compliance Testing
TDSCPM2	ANSI/ITU Telecom Pulse Compliance Testing
TDSDDM2	Disk Drive Analysis
TDSHT3	HDMI Compliance Test Software
Option PTD	Protocol Trigger and Decode Application
80SJNB	Advanced Jitter and Noise Analysis Software

Jitter and Timing Analysis



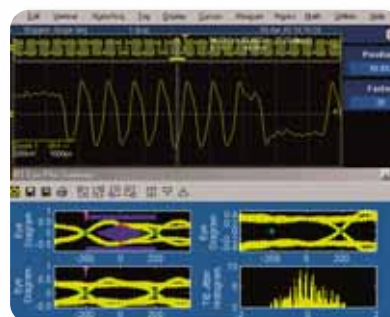
- Decompose jitter into its random and deterministic components to track down and eliminate jitter source with TDSJIT3 jitter analysis software.

Power Measurement and Analysis



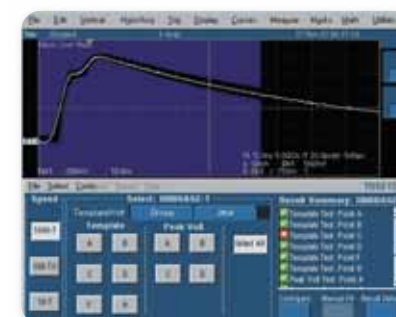
- Quickly measure and analyze power dissipation in power supply switching devices and magnetic components, and generate detailed test reports in customizable formats, with TDSPWR3 power measurement and analysis software.

Serial Data Compliance and Analysis



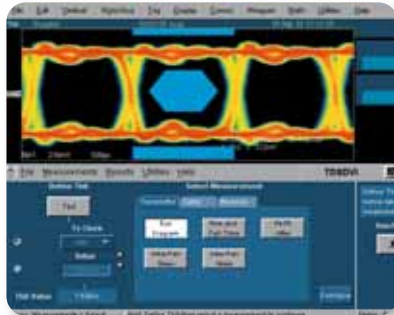
- Easily perform analog validation and compliance testing of serial data buses with TDSRT-Eye™ Serial Data Compliance and Analysis software to ensure device interoperability.

Ethernet Compliance Testing



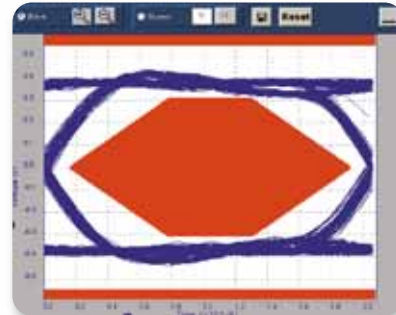
- TDSET3 software enables unprecedented efficiency with a comprehensive range of tests that include Return Loss and a complete solution featuring a test fixture.

DVI Compliance Testing



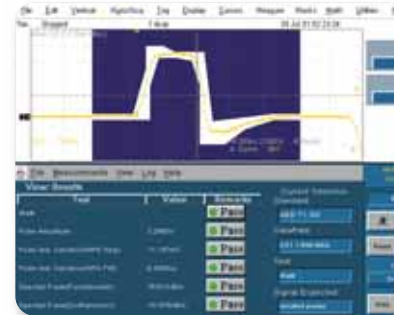
- TDSVI test solution enhances test efficiency with faster validation cycles and offers higher reliability for conformance to standards.200

USB 2.0 Compliance Testing



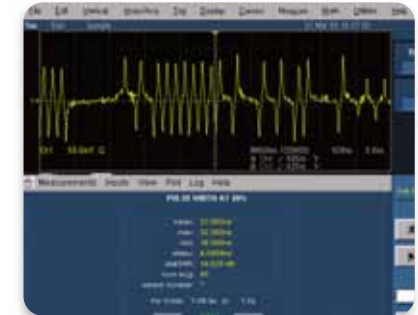
- TDSUSB2 software delivers the industry's most comprehensive solution for USB 2.0 compliance testing.

ANSI/ITU Telecom Pulse Compliance Testing



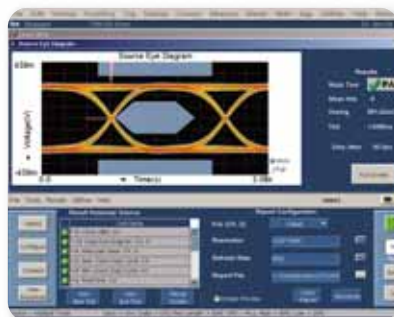
- TDSCPM2 software delivers the third-generation Digital Interface Test System (DITS) needed for full electrical compliance testing.

Disk Drive Analysis



- TDSDDM2 disk drive measurement software offers custom disk drive measurements – IDEMA measurements, such as TAA, PW50, Overwrite Resolution and Asymmetry, and PRML measurements, like autocorrelation NLTS and SNR.

HDMI Compliance Testing



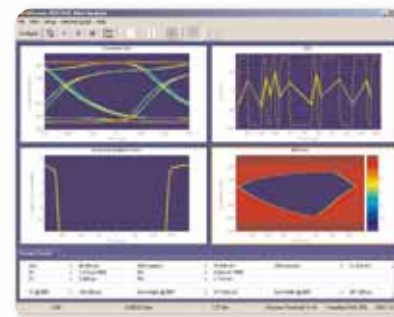
- TDSHT3 software offers a wide range of test enabling thorough verification to HDMI standards.

Protocol Trigger and Decode Application



- Trigger and translate serial data waveforms into character and protocol views for greater insight with the Option PTB.

Advance Jitter Analysis



- 80SJNB software simplifies measuring jitter and noise components.

Recommended Oscilloscope Modules

Using a TDR sampling module, the TDS8200 oscilloscope offers cutting-edge TDR performance on up to eight channels simultaneously. Each channel has an independent polarity selectable step-generator, offering unprecedented 35 ps reflected rise time. This high-performance oscilloscope provides the only true differential TDR system available today.

With its ultra-high optical bandwidth, industry-leading trigger jitter, signal sensitivity and noise performance, the CSA8200 oscilloscope ensures the

Electrical Sampling Module

Product	Features
82A04 Phase Reference Module	<200 fS _{RMS} jitter
80A05 Clock Recovery Module	Signals from 50 Mb/s to 12.6 Gb/s
80A06 Pattern Sync Module	Pattern trigger from any data-related clock; pattern length up to 2 ¹⁵ bits
80E01 Single-channel, 50 GHz Bandwidth Module	≤ 7.0 ps calculated rise time
80E02 Dual-channel, 12.5 GHz Bandwidth Module	Low-noise measurements
80E03 Dual-channel, 20 GHz Bandwidth Module	≥ 17.5 ps acquisition rise time
80E04 Dual-channel, Time Domain Reflectometry (TDR) Module	35 ps TDR reflected rise time, true differential TDR
80E06 70+ GHz Electrical Module	2.0 mV _{RMS} noise

most accurate signal acquisition for high-speed optical communications testing today. Its optical modules include built-in reference receivers to test a broad range of telecommunications and data communications rates.

Optical Sampling Module

Product	Features
80C01 Multi-rate Telecom Module	Signals at 622, 2488 Mb/s and 9.953 Gb/s
80C02 High-performance Telecom Module	Signals at 9.953 Gb/s (SONET OC-192/SDH STM-64)
80C07B Multi-rate Datacom/Telecom Module	Signals from 155 to 2500 Mb/s
80C08C Multi-rate Datacom/Telecom Module	Signals at 9.953, 10.3125, 11.0957 Gb/s (10GbE) and 10.51875 Gb/s (10G Fibre Channel)
80C10 40 Gb/s Telecom Module	Signals at 39.813 Gb/s (OC-768/STM-256) and 43.018 Gb/s (43 Gb/s ITU-T G.709 FEC)
80C11 Multi-rate Datacom/Telecom Module	Signals at 9.953, 10.3125, 10.51875, 10.664, 10.709 and 11.0957 Gb/s (10 Gb/s datacom/telecom)
80C12 Multi-rate Datacom/Telecom Module	1G, 2G and 4G telecom and datacom testing

Characteristics - Low Capacitance Probe

Type	Cable Length	Attenuation	Bandwidth at -3 dB	Compensation Range	Oscilloscope Compatibility
P8018	1 m	1X	> 20 GHz	50 Ω Inputs	CSA/TDS8200 (w/80A02)



► P7260 Active Probe.

Active Probes

Active probes give you excellent results when measuring high-frequency signals from today's complex circuits. DC offset capability allows you to use the probe's full dynamic range when measuring AC signals in the presence of common-mode voltage. TEKPROBE BNC active probes can also be used with any oscilloscope that has a BNC-type connector, if the 1103 TEKPROBE power supply is used.

Tektronix' TekConnect® interface takes active probe intelligence to the next level, providing probe power, automated signaling of probe parameters and probe controls including scale factor and offset voltage levels. The TekConnect interface extends useful bandwidth and signal fidelity out to 18 GHz.

Characteristics

Type	Cable Length	Attenuation	Bandwidth at -3 dB	Linear Dynamic Range	Interface ²	Oscilloscope Compatibility ³
P6205	1.5 m	10X	750 MHz	±10 V	TEKPROBE BNC	TDS400-700/3000/7000
P6241	1.3 m	10X	4.0 GHz	+/-4V	TEKPROBE BNC	TDS500-700/7000
P6243	1.3 m	10X	1.0 GHz	±8 V	TEKPROBE BNC	TDS400-700/3000/5000/7000
P6245	1.3 m	10X	1.5 GHz ¹	±8 V	TEKPROBE BNC	TDS400-700/5000/7000
P6249	1.4 m	5X	4.0 GHz ¹	±2 V	TEKPROBE BNC	TDS500-700/7000
P7225	1.3 m	10X	2.5 GHz	+/-4V	TekConnect	TDS/CSA7000B, TDS6000 TekConnect® Series
P7240	1.4 m	5X	4.0 GHz ¹	±2 V	TekConnect	TDS/CSA7000B, TDS6000 TekConnect® Series
P7260	1.12 m	5X/25X	6.0 GHz	+/-0.75 V / +/-3.0 V	TekConnect	TDS/CSA7000B, TDS6000 TekConnect® Series

¹ P6245/P6249/P6209 and P7240 is typical.

² Any probe with TEKPROBE BNC may be used on TekConnect Series Oscilloscopes using the TCA-BNC Adapter.

³ Probes with bandwidths >1 GHz or attenuation of 5X may not function with "Probe Cal" on older Tektronix oscilloscopes. Check www.tektronix.com for more complete information on compatibility.



► P7240 Active Probe.



► P7225 Active Probe.



► P6249 Active Probe.



► P6243 Active Probe.



► P6139A Passive Probe.

Passive Probes

Most general-purpose or laboratory oscilloscopes use passive probes to make a versatile and convenient connection to a device under test. The ideal probe/oscilloscope combination should acquire your signal and display it without altering the signal. While it is not possible to be totally non-invasive to the circuit, matching the probe and oscilloscope to the circuit under test yields excellent results for many applications. Tektronix passive probes are carefully designed to match the input characteristics of the oscilloscopes they complement, preserving maximum signal integrity.

Characteristics

Type	Cable Length	Attenuation	Bandwidth at -3 dB	Compensation Range	Read Out	Oscilloscope Compatibility
1X Passive Probe						
P6101B	2 m	1X	15 MHz	NA		All 1 MEG BNC Inputs
10X Passive Probes						
P3010	2 m	10X	100 MHz	15 to 30 pF	Yes	TDS3012/3014
P5050	1.3 m	10X	500 MHz	16 to 22 pF	Yes	TDS5000 Series
P6109B	2 m	10X	100 MHz	15 to 35 pF	Yes	TDS320/340
P6111B	2 m	10X	200 MHz	15 to 35 pF	Yes	TDS360
P6112	2 m	10X	100 MHz	15 to 35 pF		TDS200 Series
P6114B	2 m	10X	400 MHz	10 to 35 pF	Yes	TDS380
P6117	2 m	10X	200 MHz	15 to 35 pF		THS700 Series
P6131	1.3 m	10X	300 MHz	14 to 18 pF	Yes	2400 Series
P6133	2 m	10x	150 MHz	10 to 25 pF	Yes	2400 Series
P6136	1.3 m	10X	350 MHz	12 to 18 pF	Yes	2400 Series
P6137	1.5 m	10X	400 MHz	12 to 18 pF	Yes	2400 Series
P6138A	1.3 m	10X	400 MHz	12 to 18 pF	Yes	TDS400 Series
P6139A	1.3 m	10X	500 MHz	8 to 12 pF	Yes	TDS3000/500/600/7000 Series
P6150	1.0 m	1/10X	3/9 GHz	50 Ω Inputs		All 50 Ω SMA Inputs (BNC w/ Adapter)
P6158	1.2 m	20X	3 GHz	50 Ω Inputs	Yes	All 50 Ω BNC Inputs (SMA Inputs w/ Adapter)
1X/10X Switchable						
P2220	1.5 m	1X/10X	6/200 MHz	15 to 25 pF		TDS200, TDS1000, TDS2000 TPS2000 Series



► P7313, P7380 Z-Active™ Differential Probes.

Differential Probes/ Differential Pre-amplifier

P7313, P7380 Z-Active™ Differential Probes

The The Z-Active™ Differential Probe family sets the industry benchmark for signal fidelity at speeds greater than 8 GHz and 12.5 GHz. The Z-Active™ architecture preserves high bandwidth while providing improved connectivity with low loading. The variety of Tip-Clip™ Assemblies allow you to inexpensively chose the connection type that meets your needs, be it solder-in, handheld, or fixtured.



► P7380SMA Differential Signal Acquisition System.

P7380SMA Differential Acquisition System

The P7380SMA probe allows you to measure high-speed differential signals in a 50 Ohm signaling environment. It also enables you to measure a differential signal on each channel of a multiple channel oscilloscope. This is the ideal system for compliance testing of the many new multi-lane high-speed serial data standards. Input signals are attached through a pair of SMA connectors.



► P6248 Differential Probes.

P6248, P6247, P6246 Differential Probes

The P6248, P6247 and P6246 differential probes make time-domain and frequency-domain measurements in signals commonly found in the disk drive, digital IC design, and communication industries. Low capacitance, a compact probe head, and versatile adapters make these probes excellent for probing surface-mount devices while maintaining high Common Mode Rejection Ratios.



► ADA400A Pre-amplifier.

Differential Pre-amplifier

The ADA400A differential pre-amplifier allows direct oscilloscope measurements of very low-amplitude voltages and signals that are not grounded. Although the ADA400A is designed for TEKPROBE BNC interface oscilloscopes, it can be used with any oscilloscope by using the 1103 TEKPROBE power supply.

Characteristics

Model - ADA400A

Gain - X100, X10, X1, X0.1

Bandwidth - DC to 1 MHz

Bandwidth Filters -
100 Hz, 3 kHz, 100 kHz

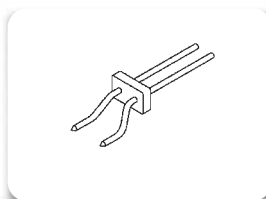
Differential Voltage -
100 mV @ X100, 1 V @ X10,
10 V @ X1, 80 V @ X0.1

Max. Input Voltage to Ground - ± 10 V @ X100, X10;
 ± 40 V @ X1, X0.1

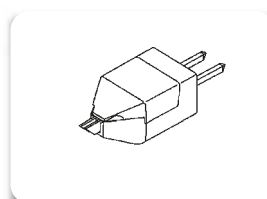
Input R - Input impedance of 1 M Ω in all settings and selectable impedance of infinite Ω ($>10^{12}$ Ω) in X100 and X10 gain settings

Input Current -
55 pF (each input)

Common Mode Rejection Ratio - $>100,000:1$ DC to 10 kHz



► P6246/P6247/P6248
TwinTip™ Probe Tip
Adapter.



► P6246/P6247/P6248
TwinFoot™ Probe Tip
Adapter.



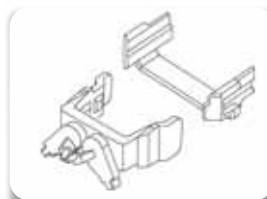
► P6330/P7330/P7350
Variable Spacing Adapter.



► P7313/P7380 Long Flex,
Small Resistor Tip-Clip
Assembly.



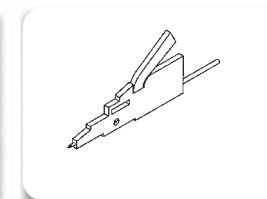
► P7313/P7380 HBW
Right-Angle Flex Tip-Clip
Assembly.



► P7313/P7380 Variable
Spacing Tip-Clip
Assembly and Tip-Clip
Ejector.



► SMG50 SMT KlipChip™.



► SMK4 Micro KlipChip™
Adapter.

Characteristics – Differential Probes

Model	Bandwidth (typical)	Attenuation	Rise Time (10-90%)	Diff. Input V Range	Comm. Input V Range	Input R Range (typical)	CMRR (typical)	Oscilloscope Compatibility
P6246	DC to 400 MHz	1X/10X	<875 ps	±0.85 V (1X) ±8.5 V (10X)	±7.0 V (1X) ±7.0 V (10X)	200 kΩ (differential mode)	>30 dB (≤1 GHz) >38 dB (≤100 MHz) >60 dB (≤1 MHz)	TDS500-700/5000/7000
P6247	DC to 1 GHz	1X/10X	<350 ps	±0.85 V (1X) ±8.5 V (10X)	±7.0 V (1X) ±7.0 V (10X)	200 kΩ (differential mode)	>30 dB (≤1 GHz) >38 dB (≤100 MHz) >60 dB (≤1 MHz)	TDS500-700/5000/7000
P6248	DC to 1.5 GHz	1X/10X	<265 ps	±0.85 V (1X) ±8.5 V (10X)	±7.0 V (1X) ±7.0 V (10X)	200 kΩ (differential mode)	>30 dB (≤1 GHz) >38 dB (≤100 MHz) >60 dB (≤1 MHz)	TDS500-700/5000/7000
P7330/ P6330	3.5 GHz	5X	<140 ps	±2 V	+5 V to –4 V	100 kΩ (differential mode)	>25 dB (≤1 GHz) >60 dB (≤1 MHz)	TDS/CSA7000B, TDS6000 TekConnect® Series
P7350	5.0 GHz	6.25X	<100 ps	±2 V	+6.25 V to –5 V	100 kΩ (differential mode)	>45 dB (≤1 MHz)	TDS/CSA7000B, TDS6000 TekConnect® Series
P7380SMA	> 8 GHz	2.5X/12.5X	< 55 ps	625 mVp-p (2.5X) 3.0 Vp-p (12.5X)	+/- 2.5 V	50 Ω per side	>15 dB (8 GHz) >20 dB (5 GHz) >35 dB (1 GHz) >50 dB (100 MHz) >60 dB (DC)	TDS/CSA7000B, TDS6000 TekConnect® Series
P7380	> 8 GHz	5X/25X	< 55 ps	±0.625 V (5X) ±2.0 V (25X)	+4 V to –3 V	100 kΩ (differential mode)	>20 dB (8 GHz) >35 dB (1 GHz) >50 dB (1 MHz)	TDS/CSA7000B, TDS6000 TekConnect® Series
P7313	> 12.5 GHz	5X/25X	< 40 ps	±0.625 V (5X) ±2.0 V (25X)	+4 V to –3 V	100 kΩ (differential mode)	>15 dB (12.5 GHz) >20 dB (8 GHz) >35 dB (1 GHz) >50 dB (1 MHz)	TDS/CSA7000B, TDS6000 TekConnect® Series



► TCP300 and TCP400 Series Current Measurement System.

Current Probes

AC/DC Current Probe for Tektronix TDS Oscilloscopes

The TCP202 current probe is a general-purpose, split-core, AC/DC current probe designed for direct connection to a TEKPROBE BNC oscilloscope interface.

Simple, Instantaneous Power Measurements

By using a P5205 or P5210 differential voltage probe and TCP202 current probe with the appropriate TDS oscilloscopes equipped with TDSPWR3 software, users can easily measure instantaneous power, and calculate and display energy on the screen. The propagation delays of the probes are matched so that the current and voltage waveforms are aligned with each other in the time domain using the oscilloscope's deskew capability.

Increased Performance and Simplicity

The TCP300 and TCP400 Series AC/DC current measurement family is a highly advanced current measurement system for today's current measurement needs. The split-core probes incorporate both transformer and Hall effect technology to provide broad bandwidth measurement capabilities from DC up to 100 MHz at current levels as low as 1 milliamp to thousands of amps (when used with CT4 current transformer). When connected to Tektronix oscilloscopes with TEKPROBE Level II or TekConnect® (with TCA-BNC) interfaces, current measurements and calculations are simple and easy.

In-circuit AC Current Probes

The CT6 current probe has an extremely small form factor and very high bandwidth measurement capability to provide access to today's read/write pre-amplifiers. The CT1 and CT2 current probes are designed for permanent, or semi-permanent, installation in the circuit. All of these solid-core current transformers have a small hole through which a current-carrying conductor is passed during circuit assembly. CT1 and CT2 current probes include a 42-inch (107 cm) P6041 probe cable.

A600 Series Current Probes

Model	Frequency Range	Current Range Peak	Termination
A621	5 Hz to 50 kHz	100 mA to 2,000 A	BNC
A622	DC to 100 kHz	50 mA to 100 A	BNC



► TCP202 current probe.



► CT6 In-circuit current probe.

AC Current Probes for Any Oscilloscope

The split-core P6021 and P6022 current probes provide versatile AC current measurements over a wide range of frequencies. These probes are for use with 1 megaohm systems.

General Purpose Current Probes

The A621 and A622 current probes work with your TDS1000, TDS2000, TPS2000 or TDS3000B Series oscilloscope.

Characteristics – Current Probes

	Bandwidth Hz to MHz	Peak Pulse	Max ACp-p	Derate Below	Derate Above	Max DC	Amp-S Product	Current/Div Display Range	Rise Time	Insertion Impedance @ 1 MHz	Max Barewire Voltage	Max Conductor Diameter	Cable Length
TCP300 and TCP400 Series Products For TEKPROBE, TekConnect and Standard 50 Ohm / 1MegOhm BNC Oscilloscope Systems													
TCP312 w/TCPA300	DC to 100	50A	60A	N/A	50 kHz	5A–1A/V 30A – 10A/V	50A*µS – 1A/V 500A*µS – 10A/V	1A/V 10A/V	≤3.5 ns	0.08 Ω	Insulated Wire Only	3.8 mm (0.15 in.)	1.5 m
TCP312 using CT4	0.5 to 20	20 kA*2	2 kA*3	50 Hz	1.2 kHz	20A	0.5A*S	20A/V 10kA/V	<17.5 ns	2.5 MΩ	3 kV	38 mm (1.5 in.)	1.5 m
TCP305 w/TCPA300	DC to 50	50A	100A	N/A	2 kHz	25A – 5A/V 50A – 10A/V	500A*µS – 5A/V NA – 10A/V	5A/V 10A/V	≤7 ns	0.035 Ω	Insulated Wire Only	3.8 mm (0.15 in.)	1.5 m
TCP305 using CT4	0.5 to 20	20 kA*2	2 kA*3	50 Hz	1.2 kHz	20A	5A*S typ	100A/V 10kA/V	<17.5 ns	1.1 MΩ	3 kV	38 mm (1.5 in.)	1.5 m
TCP303 w/TCPA300	DC to 15	150A	424A	N/A	1 kHz	25 – 5A/V 150 – 50A/V	3,000A*µS – 5A/V 15,000A*µS – 50A/V	5A/V 50A/V	≤23 ns	0.01 Ω	600V RMS CAT I & II 300V RMS CAT III	21 mm x 25 mm (0.83 x 1.0 in.)	2 m
TCP404XL w/TCPA400	DC to 2	750A	1414A	N/A	1.8 kHz	750A*5 – 1A/mV 500A – 1A/mV	NA – 1A/mV	1A/mV	≤175 ns	0.1 MΩ	600V RMS CAT I & II 300V RMS CAT III	21 mm x 25 mm (0.83 x 1.0 in.)	8 m
Direct Connect Current Probes													
TCP202	DC to 50	50 A	40 A	N/A	20 kHz	15 A	500x10 ⁻⁶	*4	≈7.0 ns	0.07 Ω	300 V CAT I	0.15 in.	2.2 m
TCP202 w/CT4	0.5 to 20	20 kA*2	2 kA*3	50 Hz	1.2 kHz	15 A	0.1	*4	≈17.5 ns	30 MΩ	3 kV	1.5 in.	2.2 m
AM503B or AM5030 Amplifier Current Probes													
A6312	DC to 100	50 A	40 A	N/A	20 kHz	20 A	100x10 ⁻⁶	1 mA to 5 A*1	≈3.5 ns	0.1 Ω	300 V CAT I	0.15 in.	2 m
A6312 w/CT4	0.5 to 20	20 kA*2	2 kA*3	50 Hz	1.2 kHz	20 A	0.1	20 mA to 5 kA*1	≈17.5 ns	30 MΩ	3 kV	1.5 in.	2 m
A6302	DC to 50	50 A	40 A	N/A	20 kHz	20 A	100x10 ⁻⁶	1 mA to 5 A*1	≈7.0 ns	0.1 Ω	300 V CAT I	0.15 in.	2 m
A6302 w/CT4	0.5 to 20	20 kA*2	2 kA*3	50 Hz	1.2 kHz	20 A	0.1	20 mA to 5 kA*1	≈17.5 ns	30 MΩ	3 kV	1.5 in.	2 m
A6302XL	DC to 17	50 A	40 A	N/A	20 kHz	20 A	100x10 ⁻⁶	1 mA to 5 A*1	≈20 ns	0.1 Ω	300 V CAT I	0.15 in.	8 m
A6302XL w/CT4	0.5 to 13	20 kA*2	2 kA*3	50 Hz	1.2 kHz	20 A	0.1	20 mA to 5 kA*1	≈20 ns	30 MΩ	3 kV	1.5 in.	8 m
A6303	DC to 15	500 A	200 A	N/A	20 kHz	100 A	10,000x10 ⁻⁶	5 mA to 50 A*1	≈23 ns	0.02 Ω	600 V CAT II	0.83 in.	2 m
A6303XL	DC to 10	500 A	200 A	N/A	1.8 kHz	100 A	10,000x10 ⁻⁶	5 mA to 50 A*1	≈35 ns	0.02 Ω	600 V CAT II	0.83 in.	8 m
A6304XL	DC to 2	700 A	700 A	N/A	1.8 kHz	500 A	0.4	500 mA to 200 A*1	≈175 ns	0.2 Ω	600 V CAT II	0.83 in.	8 m
Other Current Probe Solutions													
P6021	120 to 60	250 A	15 A	300 Hz	0.5 MHz	0.5 A	500x10 ⁻⁶	20 mA or 100 mA*1	≈5.8 ns	0.03 Ω	600 V	0.15 in.	1.5 m
P6021 w/CT4	120 to 20	20 kA*2	2 kA*3	300 Hz	1.2 MHz	20 A	0.5	400 mA or 100 A*1	≈17.5 ns	0.03 Ω	3 kV	1.5 in.	1.5 m
P6022	935 to 120	100 A	6 A	3 kHz	10 MHz	0.2 A	9x10 ⁻⁶	10 mA or 100 mA*1	≈2.2 ns	0.03 Ω	600 V	0.10 in.	2.75 m
CT1	25 K to 1000	12 A	1.4 A			0.3 A	1x10 ⁻⁶	2 mA*1 (5 mV/mA)	≈0.35 ns	1 Ω	175 VRMS CAT I	0.070 in.	1.07 m
CT2	1.2 K to 200	36 A	7 A			0.3 A	50x10 ⁻⁶	10 mA*1 (1mV/mA)	≈0.5 ns	0.1 Ω	175 VRMS CAT I	0.052 in.	1.07 m
CT6	250 K to 2000	6 A	0.7 A			0.2 A	0.25x10 ⁻⁶	2 mA (5mV/mA)	<200 ps	1.1 Ω	30 VRMS	0.032 in.	1 m

*1 Scope set at 10 mV/Div. *2 Based on voltage breakdown. *3 Based on thermal heating limits in CT4. *4 Depends on instrument used. *5 Derated w/ duty cycle and frequency.



► P5210 High-voltage Differential Probe.

High-voltage Differential Probes

Solve Your Floating Voltage Measurement Problems

The P5200, P5205 and P5210 are high-voltage differential probes that eliminate the need to operate your ground referenced oscilloscope without the proper ground connection, ensuring safe operation. The P5200 probe is designed for use with any ground referenced oscilloscope from any manufacturer, while the P5205 and P5210 probes are specific to Tektronix oscilloscopes that have a TEKPROBE BNC interface.

High-voltage Probes

The P5100 and P6015A single-ended probes let users make ground-referenced, high-voltage measurements accurately and safely.

Characteristics – High-voltage Differential Probes

Model	Switchable Attenuation	Differential Voltage RMS/CAT II	Common Voltage RMS/CAT II	DC Gain Accuracy	Bandwidth	Power Source
P5200 ¹	500X/50X	1300 V	1000 V	3%	DC to 25 MHz	AC
P5205	500X/50X	1300 V	1000 V	3%	DC to 100 MHz	TEKPROBE
P5210	1000X/100X	4400 V	2200 V	3%	DC to 50 MHz	TEKPROBE

¹ WARNING: For safe operation, do not use the P5200 High Voltage Differential Probe with oscilloscopes that have floating inputs (isolated inputs), such as the Tektronix TPS2000 Series oscilloscopes and THS700 Series oscilloscopes. The P5200 High Voltage Differential Probe requires an oscilloscope or other measurement instrument with grounded inputs.

Characteristics – High-voltage Probes

Model	Attenuation	Bandwidth	Loading (M Ω /pF)	Maximum Input Voltage	Length (Standard)	Compensation Range	Readout
P6015A	1000X	75 MHz	100/3.0	20 kV _{RMS}	10 ft/3 m ²	7–49 pF	Optional
P5100	100X	250 MHz ³	10/2.7	2.5 kV DC+pk AC 1,000 V CAT II	10 ft/3 m	7–30 pF	Yes
P5102 ⁴	10X	100 MHz	5/11.2	1,000 V _{RMS} CAT II	3.1m	24–28 pF	No
P5120 ⁵	20X	200 MHz	5/11.2	1,000 V _{RMS} CAT II	3 m	15–25 pF	No

² 25 ft./7.6 m option. ³ Typical. ⁴ For use with THS700 Series only. ⁵ For use with TPS2000 Series only.

P5102, P5120 IsolatedChannel™ Applications

In many applications, it is important to be able to isolate the measurement from earth ground and also to isolate the common voltage between channels. The P5102, paired with the THS700

Series handheld digital storage oscilloscopes, and the P5120, coupled with the TPS2000 Series digital storage oscilloscopes, deliver both the isolation for the measurement from earth ground and full isolation between the channels.

TekConnect® Signal Interconnect System for the Future

The TekConnect® signal connection system ensures the best signal fidelity for high-bandwidth oscilloscopes when probing signal bandwidths above 1 GHz.

This interface provides a convenient locking mechanism that makes it easy to preserve a reliable, robust electrical connection and ensures signal fidelity at speeds beyond the capabilities of the traditional BNC connector. All Tektronix high-bandwidth oscilloscopes feature Tekconnect, and the P7000 Series probes are directly compatible with this signal connection system. Adapters are available to provide connection to SMA-, BNC- and N-type connectors.

Connectors and Adapters

Tektronix provides a complete line of coaxial adapters and connectors. Make connections quickly without soldering or crimping.

Adapter Model Number	Connector Style	Termination	Bandwidth
TCA-BNC	BNC	50 Ω	DC to 4 GHz
TCA-SMA	SMA	50 Ω	DC to 18 GHz
TCA-N	N	50 Ω	DC to 11 GHz
TCA75	BNC	75 Ω	DC to 4 GHz
TCA-1MEG	BNC	1 M Ω	DC to 500 MHz
80A03	SMA	50 Ω	—



► TCA-BNC



► TCA-SMA



► TCA75



► TCA-N



► TCA-1MEG



► 80A03

Connectors

Connector Type	Part Number
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BNC Connectors

BNC Female to BNC Female	103-0028-00
BNC Male to BNC Male	103-0029-00
BNC "T"	103-0030-00
BNC Elbow Male to Female	103-0031-00

SMA Connectors

SMA Male to SMA Male	015-1011-00
SMA Female to SMA Female	015-1012-00
SMA "T"	015-1016-00
SMA Male to BNC Female	015-1018-00

Adapters

Adapter Configuration	Part Number
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BNC Adapters

BNC Male to GR	017-0064-00
BNC Male to Dual Binding Post	103-0035-00
BNC Male to F-type Female	013-0126-00
BNC Female to Dual Banana Plug	103-0090-00
BNC Female 75 to 50 Ω Type N Min. Loss	131-4199-00

SMA Adapters

SMA Male to BNC Female	015-0554-00
SMA Male to SMA Female	015-0549-00
SMA Kit	020-1693-00
SMA Female to BNC Male	015-0572-00
SMA Female to SMA Slide On Male	015-0553-00
SMA Male to SMA Male	015-0551-00

N Style Adapters

N Female to BNC Male	103-0058-00
N Male to BNC Female	103-0045-00

Characteristics - P6700 Series Optical-to-electrical Converters

	Wavelength Response	Bandwidth	Rise Time	Conversion Gain	Max. Input Optical Power	Noise Equivalent Power	Max. Input Fiber Core Diameter
P6701B	500 to 950 nm	DC to 1.0 GHz	≤500 ps	1 V/mW	1 mW (0 dBm)	≤0.75 μW(RMS)	62.5 μm
P6703B	1100 to 1700 nm	DC to 1.2 GHz	≤395 ps	1 V/mW	1 mW (0 dBm)	≤0.35 μW(RMS)	62.5 μm



► AMT75 Communication Adapter.



► P6701B and P6703B

Characteristics - AMT75, AFTDS

Model	Bandwidth (return loss)	VSWR Compliance	Standards
AMT75	DC to 1.0 GHz	<1.1:1 (>26 dB) ITU G.957, ITU G.703, Bellcore GR-253-CORE	ANSI TI.102,
AFTDS	7 kHz to 120 MHz	<1.1:1 (>26 dB) ITU G.703	ANSI TI.102, CE, UL

Electrical Communication Adapters

The AFTDS Differential Signal Adapter for Electrical Communication and the AMT75 75 Ω Adapter for electrical communication and video signals provide an effective way for 50 Ω-terminated instruments to analyze differential and high-speed signals. These adapters connect directly to a TDS Series oscilloscope with TEKPROBE BNC interface.

Optical-to-electrical Converters

P6700 Series

The Tektronix P6701B/P6703B convert optical signals into electrical signals for convenient analysis. They work with Tektronix oscilloscopes featuring the TEKPROBE BNC interface, or with oscilloscopes from other manufacturers equipped with the 1103 TEKPROBE power supply. The P6700 Series products are ideal for optical signal characterization in the development, manufacturing or service of optical communication systems or sources, such as eye pattern testing for communication signals (SONET/ SDH or Fibre Channel).

Attenuators, Terminators and Cables

A full range of attenuators, terminators and cables allows you to take full advantage of your test instrument.

Part Number	Impedance Ohms	Avg Power Watts	Maximum VSWR	Attenuation	Attenuation dB	Tolerance dB	Type
Attenuators w/ BNC Connectors							
011-0069-03	50 ± 2%	2	1.2 DC to 2 GHz	2X	6	± 0.5	Attenuator
011-0060-03	50 ± 2%	2	1.2 DC to 2 GHz	5X	14	± 0.6	Attenuator
011-0059-03	50 ± 2%	2	1.2 DC to 2 GHz	10X	20	± 0.6	Attenuator
011-0057-01	50 to 75	2	1.1 DC to 100 MHz	2.3X	7.2	± 0.5	Min. Loss Attenuator
Terminators w/ BNC Connectors							
011-0049-02	50 ± 2%	2	1.2 DC to 1 GHz	NA	NA	NA	Feed-through Termination
011-0129-00	50 ± 0.1%	2	–	NA	NA	NA	Feed-through Termination
011-0055-02	75 ± 1.33%	1	1.1 DC to 100 MHz	NA	NA	NA	Feed-through Termination
011-0102-03	75 ± 0.07%	0.5	–	NA	NA	NA	Coax. Termination
011-0103-02	75 ± 0.5%	0.125	–	NA	NA	NA	Return Loss Bridge
011-0155-00	50 ± 2%	0.5	1.09 DC to 26.5 MHz	NA	NA	NA	Coax. Termination
Attenuators w/ SMA Connectors							
015-1001-01	50 ± 2%	1	1.35 DC to 18 GHz	2X	6	± 0.3	Attenuator
015-1002-01	50 ± 2%	1	1.35 DC to 18 GHz	5X	14	± 0.5	Attenuator
015-1003-00	50 ± 2%	2	1.35 DC to 18 GHz	10X	20	± 0.5	Attenuator
Terminators w/ SMA Connectors							
015-1004-00	50 ± 1%	0.5	1.05 DC to 18 GHz	NA	NA	NA	Termination (F)
015-1020-00	–	–	–	NA	NA	NA	Short Circuit Termination (M)
015-1021-00	–	–	–	NA	NA	NA	Short Circuit Termination (F)
015-1022-01	50 ± 1%	0.5	–	NA	NA	NA	Termination (M)
Coaxial, Delay, Interface Cables							

Tektronix offers a wide array of coaxial, delay, and interface cables. Please contact your local Tektronix representative or visit www.tektronix.com/accessories for more details.

(M) Male (F) Female



► K4000.

Instrument Carts

Tektronix instrument carts and workstations bring you a high level of functionality while safeguarding your instrument investment. Carts are shipped ready to assemble, allowing maximum configuration flexibility.

K4000

Workstation tower with extended workspace for keyboard and mouse.

K420

Sturdy, portable rack-width cart with tilting top tray and storage drawer.*¹

K475

Workstation tower with extra long shelf and three-quarter size shelves, 75 lb (34 kg)/shelf weight capacity.

*¹ Requires 407-4996-00 for use with TDS5000 Series oscilloscopes or TLA5000 Series logic analyzers.

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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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