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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.

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Product Lifecycle Management System

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AC Current Probes

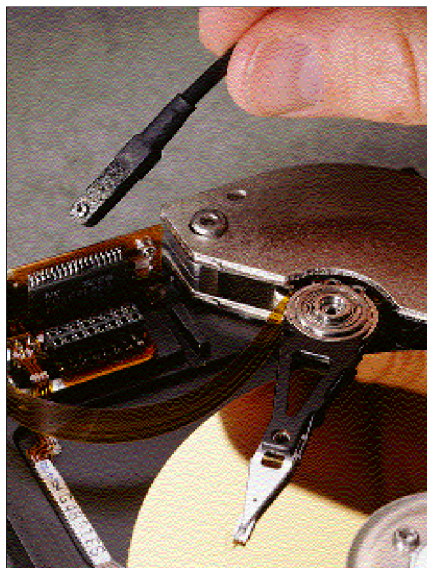
CT-1 • CT-2 • CT-6

★ Features and Benefits

- High Bandwidth
- Ultra-Low Inductance
- Very Small Form Factor
- Characterize Current Waveforms up to <200 pSec Rise Times
- Very Low Loading of Circuit Under Test
- Fits Into Dense, Closely-Spaced Circuit Designs

Ⓐ Applications

- Data Storage Read Channel Design
- Silicon Characterization
- High-Frequency Analog Design
- ESD Testing



CT-6 Current Probe

CT-6 Current Probe – New!

The CT-6 is the newest addition to the Tektronix portfolio of high-frequency current probes. It is designed to meet the needs of high-speed circuit design and test applications which require ultra high bandwidth, low inductance and extremely small form factor. The CT-6 provides up to 2 GHz bandwidth when used with high-bandwidth oscilloscopes such as the Tektronix TDS794D oscilloscope, or with other compatible 50 Ω input measuring instruments. Low inductance (<3 nH) assures that the loading effect of the CT-6 on the circuit-under-test will be negligible, which is especially important for today's low-amplitude, high-speed circuit designs such as disk drive read/write preamplifiers. The probe is a closed-circuit design which will accept un-insulated wire sized up to 20 gauge. This product is exempt from CE mark by virtue of its 30V voltage limit.



CT-1/CT-2 Current Probes with P6041 BNC Probe Cable.

CT-1/CT-2 Current Probes

The CT-1 and CT-2 Current Probes are designed for permanent or semi-permanent in-circuit installation. Each probe consists of a current transformer and an interconnecting cable. The current transformers have a small hole through which a current carrying conductor is passed during circuit assembly.

The P6041 Probe Cable provides the connection between the CT-1 and CT-2 Current Transformers and a BNC oscilloscope input. A 50 Ω termination is required to terminate the cable when connected to a high impedance (1 M Ω) oscilloscope input. One probe cable can be used to monitor several current transformers that have been wired into a circuit.

Characteristics

MINIATURE CONSTRUCTION

The CT-1 and CT-2 detachable cable design enables one or more probes to be located on circuit boards or in other limited space areas.

The CT-6 offers the smallest form factor available, for measurement on ever-shrinking circuit boards and components. It is designed for temporary installation and does not incorporate removable cables, as the CT-1 and CT-2 do.

HIGH SENSITIVITY

The CT-1 and CT-6 provide an output of 5 mV for each milliamp of input current when terminated in 50 Ω .

The CT-2 provides 1 mV per milliamp when terminated in 50 Ω .

TYPICAL SYSTEMS

The CT-1, CT-2 and CT-6 high frequency current transformers are dynamic (i.e., non-DC) current measuring devices. They are typically used in conjunction with compatible high bandwidth oscilloscopes and other instruments to observe and/or record high frequency current waveforms. The CT-1, CT-2, and CT-6 normally operate directly into 50 Ω scopes and other measuring device inputs.

The CT-1 or CT-2 can be used with 1 M Ω input systems; use the P6041 probe cable, and terminate the output with a 50 Ω feed-through termination (see Optional Accessories).

In all cases, the CT-1, CT-2 and CT-6 must work into 50 Ω to obtain specified performance and sensitivity.

See Tektronix on the World Wide Web:
<http://www.tektronix.com>

CE CT-6 is CE Exempt

ISO 9001 Tektronix measurement products
are manufactured in ISO
registered facilities.

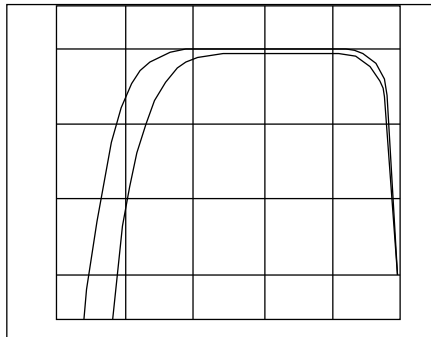
AC Current Probes

CT-1 • CT-2 • CT-6

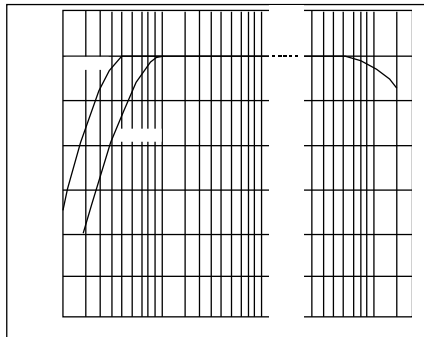
CHARACTERISTICS

CT-1, CT-2, & CT-6 CHARACTERISTICS

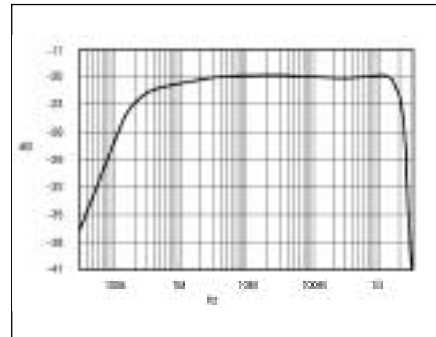
Parameter		CT-1	CT-2	CT-6
Bandwidth (typical)		25 kHz to 1 GHz	1.2 kHz to 200 MHz	250 kHz to 2 GHz
Risetime		350 p Sec	500 p Sec	200 p Sec
Sensitivity (into 50 Ω)		5 mV/mA	1 mV/mA	5 mV/mA
Accuracy		$\pm 3\%$	$\pm 3\%$	$\pm 3\%$
Magnetizing Inductance		6 microHenries	7 microHenries	1 microHenry
Leakage Inductance		2.4 nH	1 nH	1.5 nH
Insertion Impedance:	@ 10 MHz	< 1	0.1	1.1
	@ 100 MHz	2	0.5	1.3
	@ 1 GHz	-	-	11.9
Max. bare wire size		#14 wire 1.78 mm (0.070")	#16 wire 1.32 mm (0.052")	#20 wire 0.8 mm (0.032")
Max. bare wire voltage: * (< 3.25% duty factor)	RMS	175 V RMS CAT 1	175 V RMS CAT 1	30 V RMS CAT 1
	Peak	1000 V *	1000 V *	30 V
	DC	175 V	175 V	30 V
Max. peak pulse current		12 A	36 A	6 A
Max. continuous current (RMS)		450 mA	2.5 A	120 mA
Amp-Second Product		1 x 10 ⁻⁶ A*Sec	50 x 10 ⁻⁶ A*Sec	0.25 x 10 ⁻⁶ A*Sec
L/R Time Constant (droop)		> 6.35 μ sec	> 160 μ sec	0.4 μ sec
Propagation Delay		3.25 nSec	6.1 nSec	5.2 nSec



CT-1 Typical Frequency Response.



CT-2 Typical Frequency Response.



CT-6 Typical Frequency Response.

ORDERING INFORMATION

CT-1
High Frequency Current Probe

CT-2
High Frequency Current Probe

CT-6
High Frequency Current Probe

CT-1 OR CT-2 RECOMMENDED ACCESSORIES
Feed-through 50 Ω termination – Order 011-0049-01.

CT-6 OPTIONS
Opt. D1 – Calibration data report.
Opt. C3 – Three years calibration service.
Opt. D3 – Three years calibration data reports.
Opt. R3 – Three years repair service.

CT-6 STANDARD ACCESSORIES
SMA to BNC Adapter – Order 015-0572-00.
User Manual – Order 071-0453-00.
Color Cable Marker Bands
Probe Holder – Order 015-0682-00
Certificate of Traceable Calibration
WARRANTY
One Year

For further information, contact Tektronix:

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From other areas, contact: Tektronix, Inc. Export Sales, P.O. Box 500, M/S 50-255, Beaverton, Oregon 97077-0001, USA 1 (503) 627-6877.

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