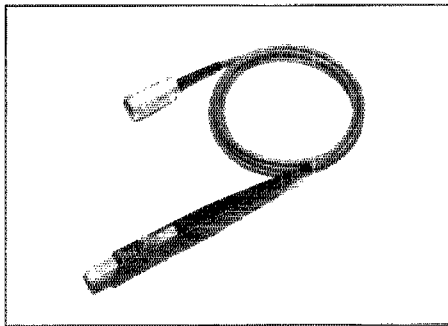


A6302 Current Probe



- 20 A AC and DC Current Measurements
- DC to 50 MHz Bandwidth
- Peak Pulse Measurements to 50 A, 1,000 A With the CT-4 Current Probe
- AC or DC Coupling
- Small Loading—0.1 Ω Insertion Z at 1 MHz, 0.5 Ω at 50 MHz

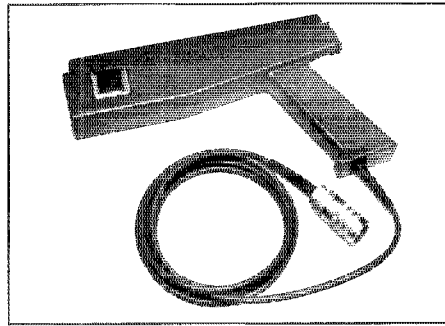
The A6302 and A6303 Current Probes are designed to be used with the AM 503 Current Probe Amplifier, any TM 500 Power Module and an oscilloscope. Both probes are used to make SCR, power supply, industrial control and motor start-up current measurements. The A6303 is recommended for measuring current in X-ray tubes to ensure compliance with PL 90-602, the Radiation Control for Health and Safety Act of 1968.

The A6302 and A6303 are valuable measurement tools when low loading is important, as when testing high impedance points or with current dependent devices. Both probes make ac or dc coupled current measurements simply by opening the sliding jaws and placing them around the conductor to be measured. For differential or sum measurements, just place properly phased conductors in the probe jaw.

Suggested measurements for the A6302 and A6303 Current Probes include:

- X-ray tube currents
- SCR currents
- Power supply currents
- Motor start-up currents
- Industrial control currents
- Relay currents
- Common-mode rejection of dc and ac currents

A6303 Current Probe



- 100 A AC and DC Current Measurements
- Peak Pulse Measurement to 500 A
- AC or DC Coupling
- 25x21 mm (1x0.83 in.) Jaw Opening
- Minimal Loading—0.02 Ω Insertion Z at 1 MHz, 0.15 Ω at 15 MHz

CHARACTERISTICS

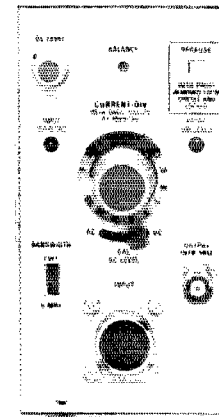
	A6302/AM 503**	A6303/AM 503**
Sensitivity:		
Scope i_p	1 mA/div to 5 A/div	10 mA/div to 50 A/div
Accuracy 3%		
Bandwidth	DC to 50 MHz	DC to 15 MHz
Rise Time	7 ns	23 ns
Max AC Current CW	40 A p-p	300 A p-p
Derated Above	20 kHz 2.5 A i_p 10 MHz	20 kHz 12 A i_p 10 MHz
Maximum Peak Current Not to Exceed A-S Product	50 A	500 A
A-S Product	100x10 ⁻⁶	10,000x10 ⁻⁶
Insertion Z	0.1 Ω @ 5 MHz 0.5 Ω @ 50 MHz	0.02 Ω @ 1 MHz 0.15 Ω @ 15 MHz
Max Hardware Volts	500 V	700 V
Max Conductor Diameter	0.15 inch	0.83 inch
System Prop Delay	\approx 30 ns	\approx 40 ns
Cable Length	2 m	2 m
Tangential Noise	0.3 mA	3 mA
Aberrations	+5%	+5%
Magnetic Susceptibility	250 μ A/Gauss	25 mA/Gauss
Operating Temp	0 to +50°C	0 to +50°C

** A6302, AM 503 or A6303, AM 503 calibrated as a set.

ORDERING INFORMATION

A6302 2 m Current Probe \$595
Includes: 5 in (130 mm) ground lead (G7, 175-0124-01); 3 in (75 mm) ground lead (G7, 175-0263-01); 2 miniature alligator clips (A16, 344-0046-00); instruction manual (070-3905-01).
A6303 2 m Current Probe \$1,120
Includes: Carrying case (016-0622-00); instruction manual (070-3906 01).

AM 503 Current Probe Amplifier For 50 Ω /1 M Ω



The AM 503 operates in any one of the TM 500 power modules and is connected to the A6302 or A6303 probes through a multipin connector.

It is calibrated in 12 steps; the knob skirt is illuminated to indicate current per division. Bandwidth can be limited to 5 MHz to eliminate unwanted transients. Both ac and dc coupling are provided. AC coupling allows the measurement of low amplitude signals on a high level dc current. A front panel light warns of input currents above 100 A dc with the A6303 or 20 A dc with the A6302. A pushbutton allows degaussing of probe when it is removed from the circuit and locked in operating position. The output of the A6303/AM 503 can be displayed on any oscilloscope that has at least a 50-MHz bandwidth and a 10 mV sensitivity. The A6302/AM 503 can be used on a 100-MHz oscilloscope with 10 mV sensitivity to display the probe's full bandpass. The AM 503 output can be plugged directly into a 50 Ω recording instrument, or a 50 ohm termination which is supplied. See page 461 for specific specifications.

Note: To achieve optimum performance the current probe, current probe amplifier, and oscilloscope should be calibrated as a system.

ORDERING INFORMATION

AM 503 Current Probe Amplifier \$1,185
Includes: 50 Ω BNC cable (012-0057-01); 50 Ω BNC termination (011-0049-01); instruction manual (070-2052-01).

The AM 503 requires one of the TM 500 Series power modules. See Modular Instruments section.
TM 501 Power Module \$500
TM 502A Power Module \$235
TM 503 Power Module \$400
AM 503S Current Probe System \$2,015
Includes: AM 503 Current Probe Amplifier; TM 502A Power Module; A6302 Current Probe.

OPTIONS

Option 01—A6303 Current Probe, +\$1,120
Option 03—Substitute A6303 for A6302. +\$525