



A6312 DC-coupled Current Probe

DC to 100 MHz Bandwidth

Simultaneous AC/DC
Measurements

High Sensitivity

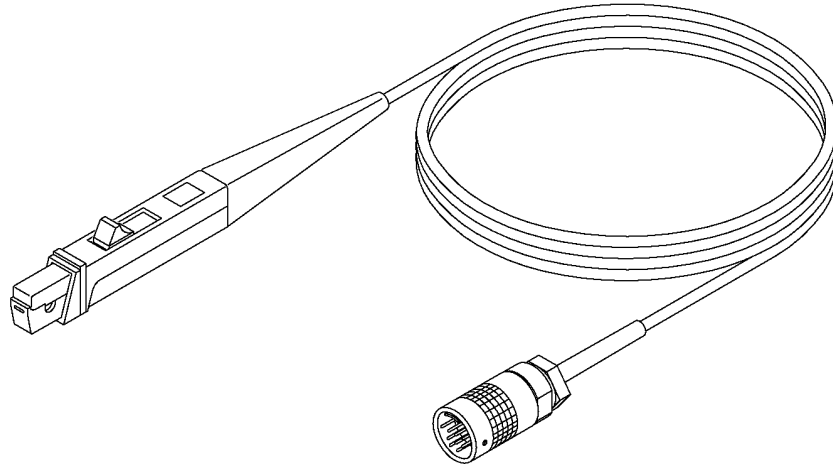
Split Core Construction Enables
Easy Circuit Connection

20 Amps DC + Peak AC Current

50 Amps Peak Pulse Current

100 x 10⁻⁶ Amp * Sec Product

UL, CSA, CE Marking



The A6312 is a 100 MHz DC-coupled current probe for use with the AM 503, AM 503A, AM 503B, and AM5030 current probe amplifiers. The combination of an A6312, an AM 503B, and a TM502A provides a flexible current-measurement tool that can display currents up to 20 Amps DC + peak AC and 50 Amps peak pulse on any oscilloscope. It has a split core construction that permits easy connection to the circuit under test. It may be ordered either separately as the A6312 or as Option 05 to the AM 503S.

SPECIFICATIONS

STANDARD SPECIFICATIONS for A6312/AM 503B/TM502A

Bandwidth	DC to 100 MHz
Maximum DC + Peak AC Current	20 Amps
Maximum Peak Pulse Current	50 Amps
Minimum Sensitivity	1 mA/div
DC Accuracy	±3% (±1.5% typical)
Maximum Barewire Voltage	300 Volts (Category I)

TYPICAL CHARACTERISTICS

Insertion Impedance	0.1 Ohms at 1 MHz 0.2 Ohms at 50 MHz 1.0 Ohm at 100 MHz
Propagation Delay	17 ns
Maximum Conductor Diameter	3.8 mm (0.15 in.)
Electrostatic Immunity (per IEC 801-2)	>8 kV
Amp * Sec Product	100 x 10 ⁻⁶ Amp * sec
Risetime	≤3.5 ns

PHYSICAL CHARACTERISTICS

Probe Weight	0.25 kg (0.56 lbs.)
Cable Length	2 m (6.6 ft.)

POWER REQUIREMENTS

The A6312 is powered by the AM 503B/TM502A. The performance specifications listed are for this combination of products.

A6312 SAFETY CERTIFICATIONS

UL 3111-1
CSA 1010.1
IEC 1010-1, 1010-2-032



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SYSTEM SPECIFICATIONS

	A6312/AM 503B	A6312/AM 5030	A6312/AM 503A	A6312/AM 503
Bandwidth	DC to 100 MHz	DC to 100 MHz	DC to 80 MHz	DC to 100 MHz
Risetime (10% to 90%)	≤3.5 ns	≤3.5 ns	≤4.4 ns	≤3.5 ns ¹
Aberrations (typical)	7% p-p	7% p-p	7% p-p	7% p-p ¹
DC Gain Accuracy	≤3% (<1.5% typical)	≤3%	≤3%	≤3%
Noise, RMS (typical)	≤250 μA	≤250 μA	≤250 μA	≤250 μA

¹ Requires adjustment of R364 (HFComp) in amplifier.

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ORDERING INFORMATION

A6312 DC-COUPLED CURRENT PROBE

Includes: Instruction Manual P/N 070-9603-00

RELATED PRODUCTS

AM 503B

Current Probe Amplifier

AM 5030

Programmable Current Probe Amplifier

AM 503S

Current Measurement System

A6302

Current Probe – DC to 50 MHz, 20A

A6302XL

Current Probe – DC to 17 MHz, 20A, 8 m cable

A6303

Current Probe – DC to 15 MHz, 100A

A6303XL

Current Probe – DC to 10 MHz, 100A, 8 m cable

A6304XL

Current Probe – DC to 2 MHz, 500A

P5200

High Voltage Differential Probe

AM 503S

Current Measurement System

Opt 01 – Adds A6303 Probe

Opt 03 – Substitutes A6303 Probe for A6302 Probe

Opt 05 – Substitutes A6312 Probe for A6302 Probe

Opt 09 – Deletes A6302 Probe