

## TEKTRONIX

# A6303

The Tektronix A6303 is a high-power, split-core AC/DC current probe designed for use with Tektronix current probe amplifiers, including the AM503 series and the 11A16. Capable of measuring continuous currents up to 100 A and peak currents up to 500 A, it supports a wide frequency range from DC to 15 MHz, making it ideal for high-amplitude, lower-frequency electrical analysis on conductors up to 21.1 mm in diameter.

## SPECIFICATIONS

### General

|            |                                                                                       |
|------------|---------------------------------------------------------------------------------------|
| Interfaces | Proprietary Tektronix 12-pin male connector (for compatible current probe amplifiers) |
|------------|---------------------------------------------------------------------------------------|

### Physical

|                       |                                          |
|-----------------------|------------------------------------------|
| Power Supply          | Powered via host current probe amplifier |
| Operating Temperature | 0 to +50 °C °C                           |
| Dimensions (W×H×D)    | 41 mm × 32 mm × 267 mm mm                |
| Weight                | 0.34 kg kg                               |

### Electrical Performance

|                               |              |
|-------------------------------|--------------|
| Bandwidth                     | DC to 15 MHz |
| Rise Time                     | ≤24 ns       |
| Maximum Peak Pulsed Current   | 500 A        |
| Amp-Second Product            | 10,000 A*μs  |
| Insertion Impedance at 1 MHz  | 0.02 Ω       |
| Insertion Impedance at 10 MHz | 0.2 Ω        |

### Physical and Mechanical

|                            |                   |
|----------------------------|-------------------|
| Maximum Conductor Diameter | 21.1 mm (0.83 in) |
| Cable Length               | 2 m               |
| Mechanical Design          | Split-core        |

### System Compatibility and Interfaces

|                       |                                      |
|-----------------------|--------------------------------------|
| Compatible Amplifiers | AM503, AM503A, AM503B, AM5030, 11A16 |
|-----------------------|--------------------------------------|

### Environmental Specifications

|                                 |               |
|---------------------------------|---------------|
| Non-Operating Temperature Range | -40 to +75 °C |
|---------------------------------|---------------|

**Electrical Characteristics**

|                           |                                              |
|---------------------------|----------------------------------------------|
| Maximum Bare Wire Voltage | 700 V RMS (CAT I), 300 V RMS (CAT II)        |
| Propagation Delay         | 40 ns                                        |
| System DC Accuracy        | Within ±3% (with AM503 series amplifier)     |
| Sensitivity Range         | 20 mA/div to 10 A/div (with AM503B / AM5030) |

**Environmental**

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| Operating Altitude     | 2,000 m (6,560 ft)                                         |
| Non-Operating Altitude | 12,190 m (40,000 ft)                                       |
| Operating Humidity     | Up to 95% RH at up to +30 °C; up to 45% RH at up to +50 °C |

**Compliance & Safety**

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Safety Certifications | UL3111-1, CSA1010.1, EN61010-1, EN61010-2-032 |
|-----------------------|-----------------------------------------------|

**Performance**

|                              |           |
|------------------------------|-----------|
| Aberrations                  | ≤ 7% p-p  |
| Insertion Impedance at 50 Hz | < 0.002 Ω |
| Insertion Impedance at 1 kHz | < 0.002 Ω |

**TECHNOLOGY**

Hall Effect and Transformer

**APPLICATIONS**

AC/DC current measurement for power electronics design, motor drives, and industrial testing

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