Instructions

Tektronix

A6303 & A6303XL
100 Amp AC/DC Current Probe

070-3906-05

Warning
The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

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Specifications

Mechanical, electrical, and environmental characteristics unique to the probe are listed in this section. The probe's performance specifications are determined by the amplifier that it is used with. Please refer to the amplifier documentation for probe performance specifications.

Table 1: Electrical Characteristics

Bandwidth (-3 dB)	A6303: DC to 15 MHz A6303XL: DC to 10 MHz
Rise Time (10% to 90%)	A6303: ≤23 ns A6303XL: ≤35 ns
Frequency Derating	12 A at 10 MHz
Maximum Bare Wire Working Voltage	600 V_{RMS}, CAT II 300 V_{RMS}, CAT III
Maximum Continuous Current	100 A (DC + peak AC)
Maximum Pulsed Current	500 A
Amp · Second Product	1×10^{-2} A · s (10,000 A · μs)
Insertion Impedance	0.02 Ω at 1 MHz 0.15 Ω at 15 MHz

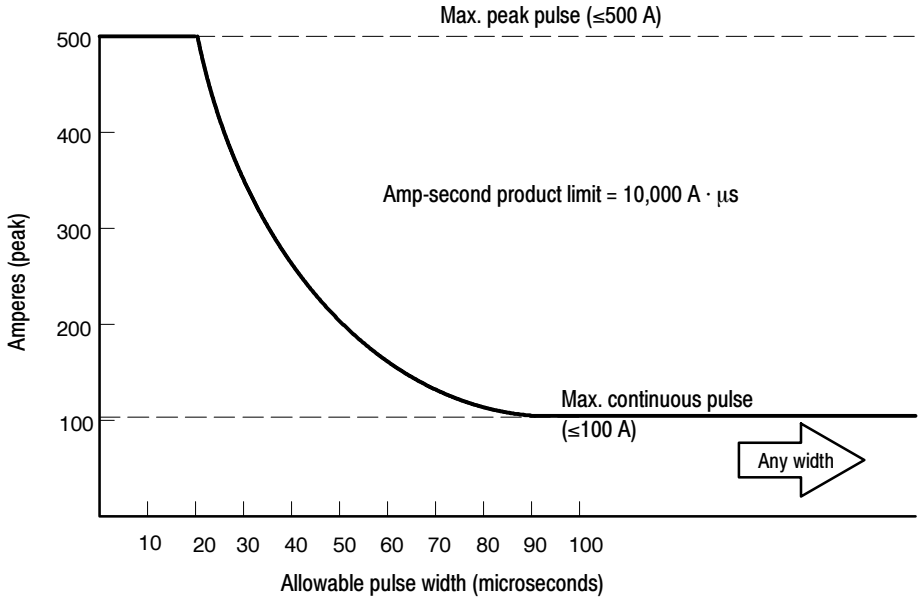

Figure 4: A6303 and A6303XL specified operating area

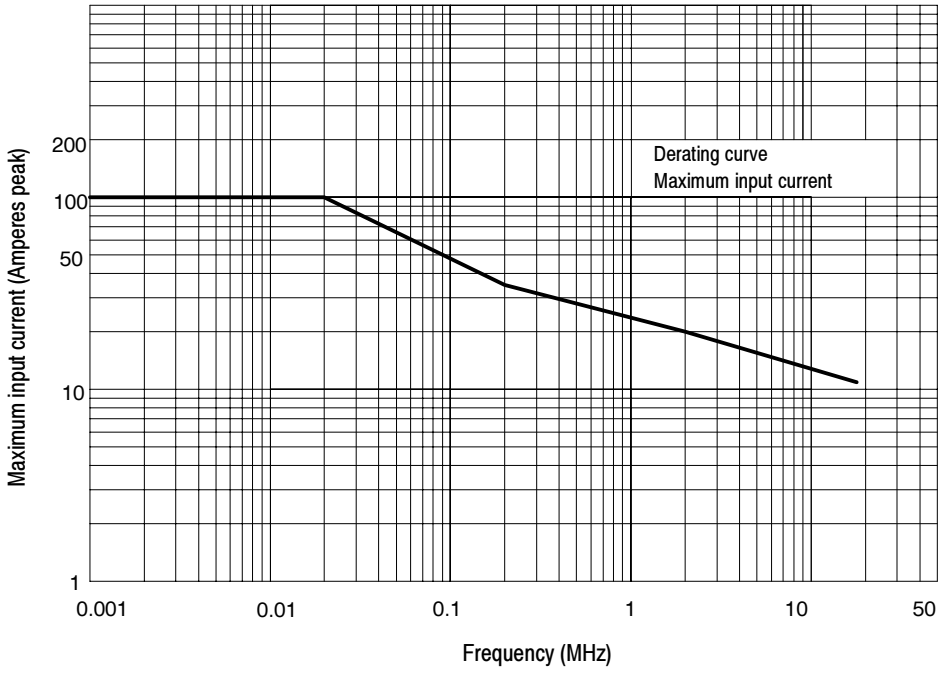

Figure 5: A6303 and A6303XL frequency derating curve

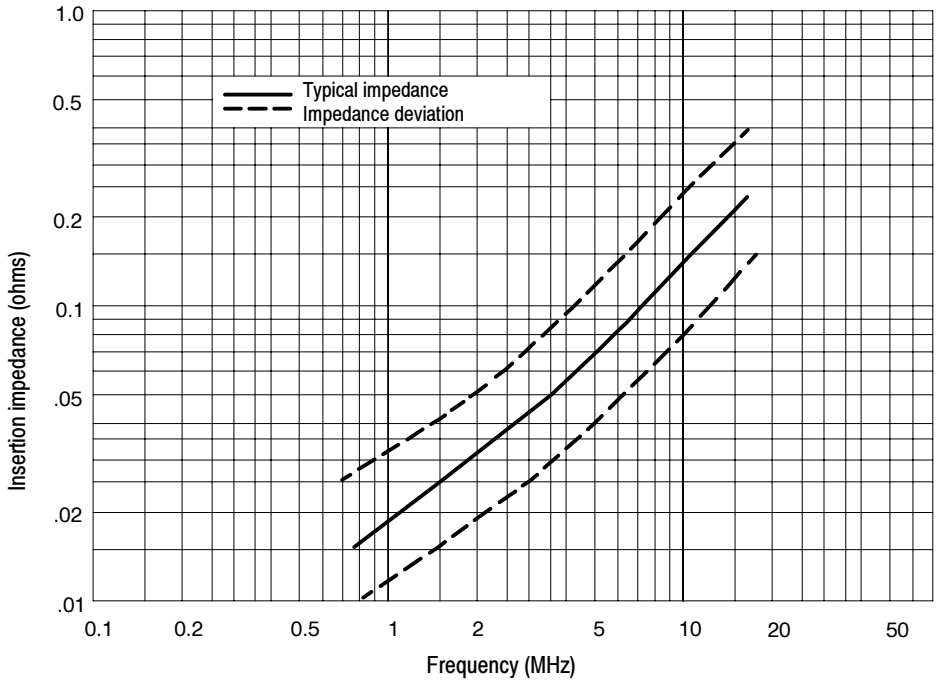

Figure 6: A6303 and A6303XL insertion impedance curve

Table 2: Mechanical Characteristics

Probe Dimensions	Length: Width: Height:	26.8 cm (10.6 inches) 4.05 cm (1.6 inches) 15.6 cm (6.13 inches)
Cable Length	A6303: A6303XL:	2 m (6.6 feet) 8 m (26.25 feet)

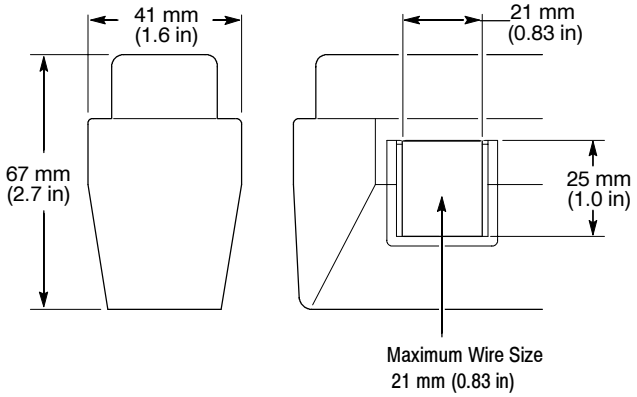

Figure 7: A6303 and A6303XL Probe Jaw Dimensions (Nominal)

Table 3: Environmental Characteristics

Operating Temperature	0°C to 50°C
Storage Temperature	-40°C to 75°C
Humidity	
Nonoperating	30°C to 60°C at 90 to 95% RH
Operating	30°C to 50°C at 90 to 95% RH
Altitude	
Operating	2,000 m (6,416 ft)
Transportation	Qualifies under National Safe Transit Procedure 1A, category II, 36 in. drop.
Mechanical Shock	500 g. Half sine. Three shocks on three of the probe for 1 ms duration. Total of 9 shocks.
Vibration	0.025 in. pk-pk displacement. 10 - 50 Hz in 1min. cycles. Hold 9 min. at any major resonance, or if none, at 55 Hz. Total time, 54 min.
Random Vibration	
Operating	0.31 g_{RMS}, 5 to 500 Hz, 10 minutes on each axis. Tektronix Std. 062-2858-00, Rev. B, Class 3.