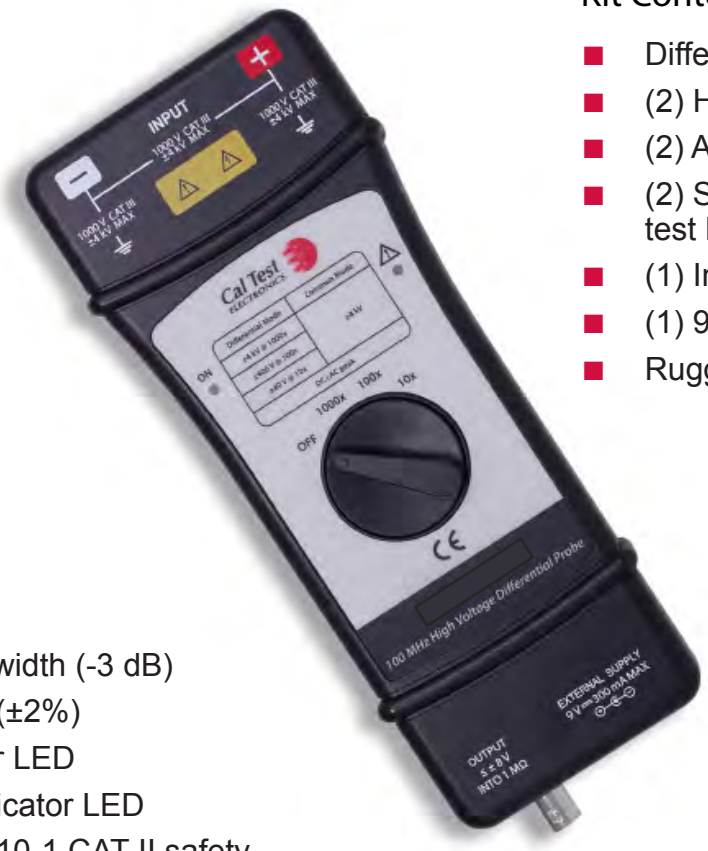
CT4197/CT4198 Datasheet

100 MHz Differential Probe

Overview:

The CT4197 and CT4198 differential probes allow safe, accurate measurement between two voltage points where neither point is referenced to ground. Both probes offer a 100 MHz bandwidth. Both are compatible with oscilloscopes from all major manufacturers. The probes are exclusively powered by the included 9 V power adapter.



Kit Contents:

- Differential probe
- (2) High Voltage hook probes
- (2) Alligator clips
- (2) Sheathed 4 mm banana plug test leads, silicone jacketed
- (1) Insulated BNC cable
- (1) 9 V power adapter
- Rugged carrying case

Features:

- 100 MHz bandwidth (-3 dB)
- High accuracy (±2%)
- Power indicator LED
- Over range indicator LED
- Meets IEC 61010-1 CAT II safety standard
- CT4198
- Up to ±8 kV (DC + AC peak)
- Attenuation 20x/200x/2000x
- CT4197
- Up to ±4 kV (DC + AC peak)
- Attenuation 10x/100x/1000x

Technical data subject to change.

Cal Test ELECTRONICS

All specifications apply to the unit after a temperature stabilization time of 20 minutes over an ambient temperature range of 25 °C ± 5 °C.

Electrical Characteristics

Probe	CT4197	CT4198
Bandwidth	100 MHz	
Rise Time	3.5 ns	
Attenuation	10x, 100x, 1000x	20x, 200x, 2000x
Accuracy	±2%*	
AC CMRR	80 dB @ 60 Hz 60 dB @ 100 Hz 50 dB @ 1 MHz	
Maximum Differential Input Voltages (DC + AC peak)	±40 V @ 10x	±80 V @ 20x
	±400 V @ 100x	±800 V @ 200x
	±4000 V @ 1000x	±8000 V @ 2000x
Absolute Maximum Rated Input Voltage (each side to ground)	4000 Vrms	8000 Vrms
Input Impedance (Differential)	20 MΩ // 2 pF	30 MΩ // 1.5 pF
Input Impedance (each side to ground)	10 MΩ // 4 pF	15 MΩ // 3 pF
Output Voltage Swing	±8 Vpp (driving 1 MΩ oscilloscope input)	
Offset (typical)	±5 mV	
Noise (typical)	2 mVrms	
Source Impedance	50 Ω	
Power Supply	9 V power adapter (included)	

Mechanical Characteristics

Weight	390 g
Dimensions	218 x 83 x 30 mm
BNC Cable Length	100 cm
Input Leads Length	55 cm each

Environmental Characteristics

Operating Temp/Humidity	0°C to 50°C / 10% to 85% RH
Storage Temp/Humidity	-30°C to 70°C / 10% to 90% RH
Pollution Degree	Pollution Degree 2

Safety Specifications

IEC 61010-1 CAT II

* Accuracy based on DMM with 10 MΩ input impedance.

Specifications are subject to change without notice. To ensure the most current version of this manual, please download the current version from our website: caltestelectronics.com

Performance Data Plots

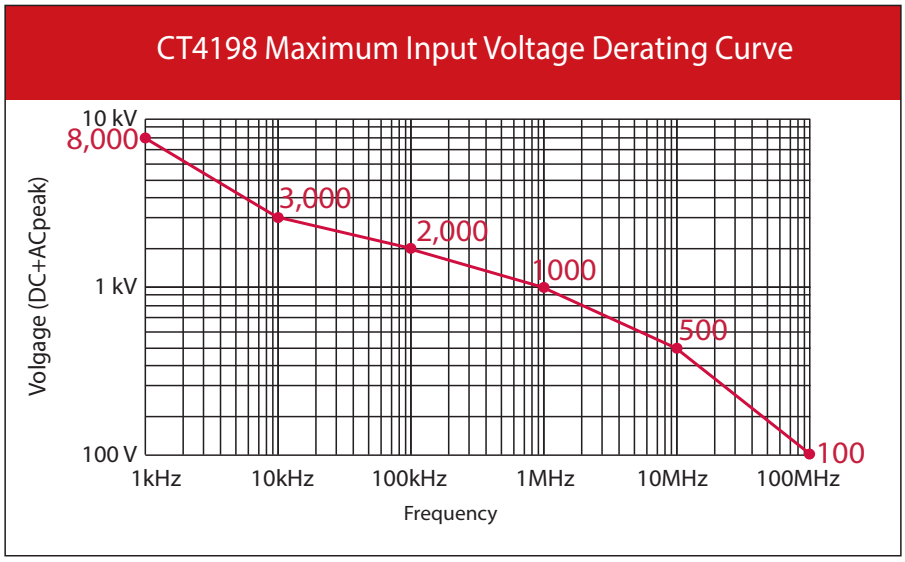


Figure 1 CT4198 Derating Curve

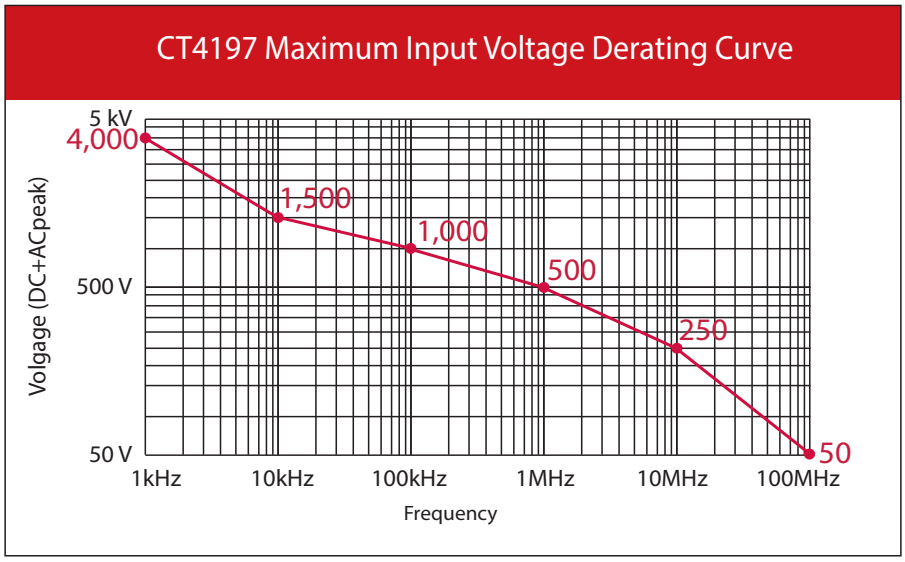


Figure 2 CT4197 Derating Curve

Figure 1 Contents Image