CT4197/CT4198 100 MHz Differential Probe

Datasheet

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

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All specifications apply to the unit after a temperature stabilization time of 20 minutes over an ambient temperature range of 25 $^{\circ}$ C ± 5 $^{\circ}$ 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
(DC + AC peak)	±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 M Ω 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



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Performance Data Plots

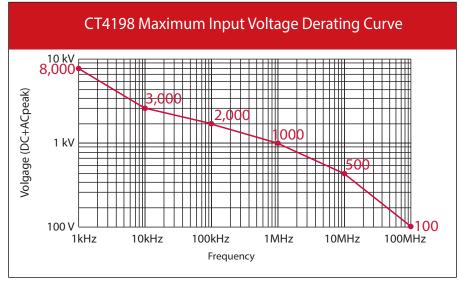


Figure 1 CT4198 Derating Curve

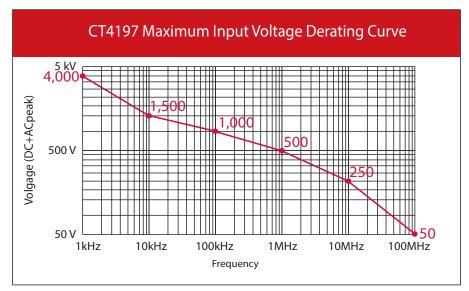


Figure 2 CT4197 Derating Curve



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Figure 1 Contents Image



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