



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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CT3681/CT3683

High Voltage Differential Probe 70 MHz / ± 7 kV

Datasheet

Overview:

Differential probes allow safe, accurate measurement between two voltage points where neither point is referenced to ground. The CT3681 and CT3683 both offer a 70 MHz bandwidth and can test up to ± 7 kV (DC + AC peak). Compatible with oscilloscopes from all major manufacturers, the probes can be battery operated, powered by a universal adapter (optional), or powered by USB power lead (optional) if the oscilloscope is so equipped.



CT3681 shown

Features:

- Meets IEC 61010-031 safety standard
- 70 MHz bandwidth (-3 dB)
- Up to ± 7 kV differential and common mode voltage
- Selectable attenuation settings of 100x/1000x
- Compatible with most oscilloscopes
- Power and over-range indicators
- High accuracy ($\pm 2\%$)
- High CMRR
- Unique high voltage input leads and hook probes (CT3683)
- Powered by 4 AA batteries (included)
- Power adapter, CT3723 (optional)
- USB power lead, CT4122 (optional)

Electrical Specifications	
	CT3681 & CT3683
Bandwidth (-3dB)	70 MHz (driving 1 M Ω oscilloscope input)
Rise Time (10%-90%)	5 ns
Attenuation ratio	100x/1000x
Accuracy	$\pm 2\%$
CMRR (typical)	-80 dB @ 50 Hz -60 dB @ 20 kHz
Maximum Differential Input Voltage (DC + AC peak)	± 700 V @ 100x attenuation ± 7000 V @ 1000x attenuation
Maximum Common Mode Input Voltage (DC + AC peak)	± 700 V @ 100x attenuation ± 7000 V @ 1000x attenuation
Absolute Maximum Rated Input Voltage (each side to ground)	5000 Vrms CAT I
Input Impedance	50 M Ω // 7 pF (each side to ground) 100 M Ω // 5 pF (between inputs)
Output Voltage Swing	± 7 V (driving 1 M Ω oscilloscope input)
Offset (typical)	± 5 mV (adjustable)
Noise (typical)	0.9 mVrms
Source Impedance	50 Ω
Power Supply	4 AA batteries (included) or CT3723 power adapter (optional) CT4122 USB power lead (optional)

Mechanical Characteristics	
Weight	500 g (probe only)
Dimensions	202 x 83 x 38 mm
BNC Cable Length	90 cm
Input Leads Length	60 cm each
CT3681 Probes	1000 V, CAT III, 20 A
CT3683 Probes	7000 V, CAT I, 2 A

Environmental Characteristics	
Operating Temp/Humidity	-10°C to 40°C / 25% to 85% RH
Storage Temp/Humidity	-30°C to 70°C / 25% to 85% RH
Pollution Degree	Pollution Degree 2
Altitude	Operating: 3,000 m Nonoperating: 15,300 m

Safety Specifications	
IEC 61010-031 CAT I	