

# 30 MHz High-Voltage Differential Probe, cTUVus Listed

## CT4447 Series



### Features:

- Two models available
- Bandwidth to 30 MHz
- Up to 1,400 V differential (DC + ACPeak)
- 1,000 V CAT III rated
- cTUVus safety certified
- Voltage over range indicator
- Switchable attenuation
- Multiple power options - batteries, oscilloscope, or mains
- Insulated BNC interface
- Protective rubber boot
- Two-year warranty

### Description:

Oscilloscope users are often faced with the need to make measurements between two voltages, both of which are not at earth ground. Differential probes are designed to allow earth grounded oscilloscope to make safe, accurate floating measurements between these two points.

The CT4447 Series probes convert these floating signals to low-voltage ground-referenced signals that can be displayed safely on any ground-referenced oscilloscope.

Compatible with oscilloscope (with 1 M input) from all major manufacturers, the probes can be powered by batteries (included), a universal mains adapter (included), or by the oscilloscope itself, if USB equipped.

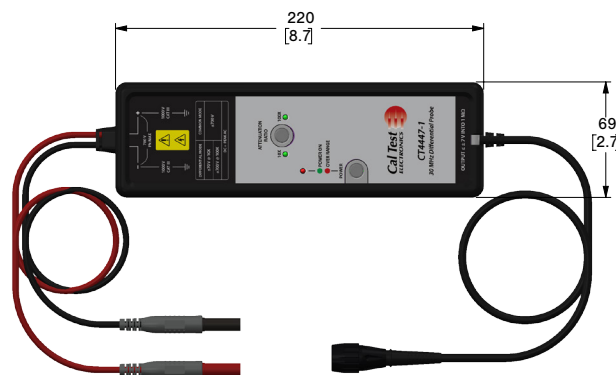
The probe series is cTUVus certified to IEC 61010-031 for user safety and confidence.

For additional product information, cross-references, or other test accessory information, visit [www.caltestelectronics.com](http://www.caltestelectronics.com).

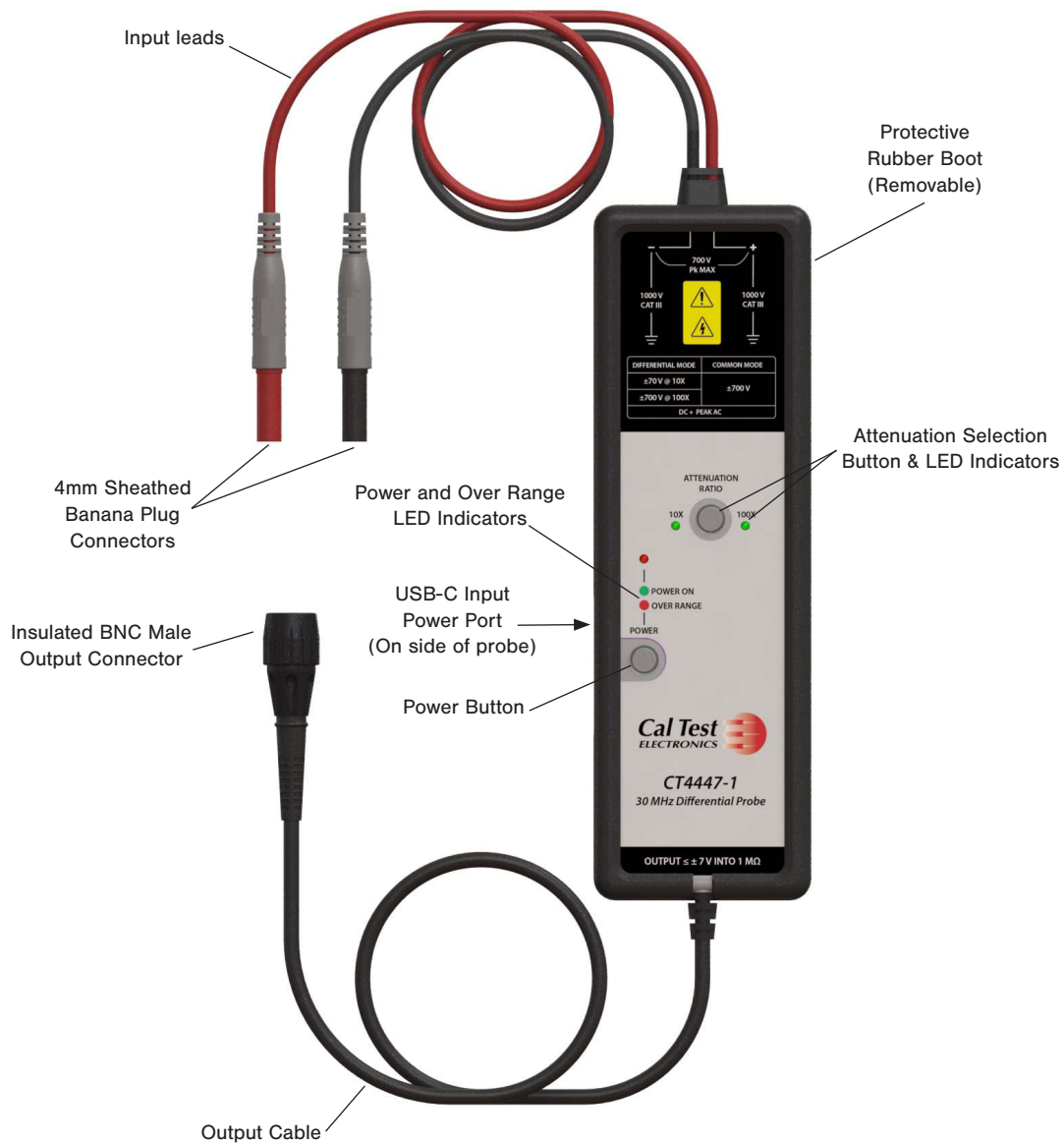
### WARNING

As with all high-voltage test accessories, please read and follow all recommended safety instructions.

### Outline Drawing: (not to scale)



**Diagram:**



**Specifications:**

**Mechanical (same for both versions)**

Parameter	Characteristic
Input Leads Length (each)	55 cm ±3 cm
BNC Cable Length	95 cm ±3 cm
Dimension (L x W x H)	220 mm, 68 mm, 28 mm (with protective rubber boot)
Weight	488 g (1.08 lb) (with batteries and protective rubber boot)
USB Type C Cable Length	100 cm ±3 cm

## Specifications: (continued)

### Electrical (Not Warranted)

Parameter	CT4447-1	CT4447-2
Bandwidth (-3 dB)	30 MHz	30 MHz
Gain Accuracy	±2%	±2%
Attenuation Ratio	10x / 100x	20x / 200x
Rise Time	14 ns	14 ns
Absolute Maximum Rated Input Voltage (each side to ground)	1000 V CAT III	1000 V CAT III
Maximum Differential Input Voltage (DC + AC Peak)	±70 V at 10x ±700 V at 100x	±140 V at 20x ±1400 V at 200x
Maximum Common Mode Input Voltage (DC + AC Peak)	±70 V at 10x ±700 V at 100x	±140 V at 20x ±1400 V at 200x
Input Impedance	5 MΩ, 2 pF (each side to ground)	5 MΩ, 2 pF (each side to ground)
Output Voltage	±7 V (driving 1 MΩ load)	±7 V (driving 1 MΩ load)
Offset (typical)	±20 mV	±20 mV
Noise (typical)	0.7 mVrms	0.7 mVrms
CMRR	50 Hz: -72 dB 20 kHz: -66 dB 200 kHz: -56 dB	50 Hz: -72 dB 20 kHz: -66 dB 200 kHz: -56 dB
Power Requirements	4 x AA batteries or USB-C Cable	4 x AA batteries or USB-C Cable
Mains Adapter (NA Plugs)	Input: 100-240 V AC, 0.35 A Output: 5 V DC, 1 A	Input: 100-240 V AC, 0.35 A Output: 5 V DC, 1 A

### Environmental (same for both versions)

Parameter	Characteristic
Operating Temperature	-10°C to 40°C (14°F to 104°F)
Storage Temperature	-30°C to 70°C (-22°F to 158°F)
Humidity	≤ 80% RH @ 25°C to 35°C (77°F to 95°F)
Altitude	Operating: 2000 m Non-operating: 15000 m
Pollution Degree	P2

### Ordering Information:

#### CT4447-1

30 MHz, 700 V, 10x/100x

#### CT4447-2

30 MHz, 1.4 kV, 20x/200x

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### Supplied Accessories:

Accessory	Model No.
Insulated Sprung Hook Probe, 1000 V CAT III, 20 A, Pair (B/R)	CT4386
Protective Rubber Boot, Black	CT4470-0
Power Adapter, NA Plug to USB Jack	CT4471
EU Plug Converter, NA to EU Plug	CT4472
USB Power Cord, 1 m, USB-A to USB-C	CT4473-100

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