

# CT4121

## 1.2 GHz Active FET Probe Kit

# Datasheet

### Overview:

The CT4121 is a compact FET probe with very high input resistance and low input capacitance. With a 1.2 GHz bandwidth, this probe is ideal for timing analysis or troubleshooting high speed logic circuits, for design verification of disk drives, as well as for wireless and data communication design. The CT4121 can measure up to  $\pm 40$  V (DC + AC peak). Compatible with oscilloscopes from all major manufacturers, the probe is powered by the included 9 V battery or direct from the oscilloscope using the included USB power lead.

### Features:

- 1.2 GHz bandwidth (-3 dB)
- Up to  $\pm 40$  V (DC + AC peak)
- Attenuation 10x
- High accuracy ( $\pm 2\%$ )
- Power indicator LED
- SMD accessory kit



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           |   |
|--------------------------------------|---|
| Bandwidth (-3dB)                     | 1.2 GHz   |
| Rise Time (probe only)               | 291 ps  |
| Attenuation ratio                    | 10x   |
| Accuracy                             | ±2%   |
| Input Dynamic Range (DC + AC peak)   | ±15 V   |
| Maximum Input Voltage (DC + AC peak) | ±40 V   |
| Input Impedance                      | 1 MΩ // 3 pF typical  |
| Output Voltage Swing                 | ±1.5 V (driving 50 Ω oscilloscope input)  |
| Offset (typical)                     | ±5 mV   |
| Adjustable output offset range       | ±28 mV  |
| Noise (typical)                      | 0.3 mVrms   |
| Source Impedance                     | 50 Ω  |
| Power Supply                         | 9 V battery (included) or<br>CT4122 USB power lead (included) or<br>CT3723 power adapter (optional) |
| Safety Specifications                | IEC 61010-031 CAT I   |

| Mechanical Characteristics |                 |
|----------------------------|-----------------|
| Weight                     | 200 g           |
| Dimensions                 | 83 x 19 x 14 mm |
| Cable Length               | 120 cm (Total)  |

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

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](http://caltestelectronics.com)

## Performance Data Plots

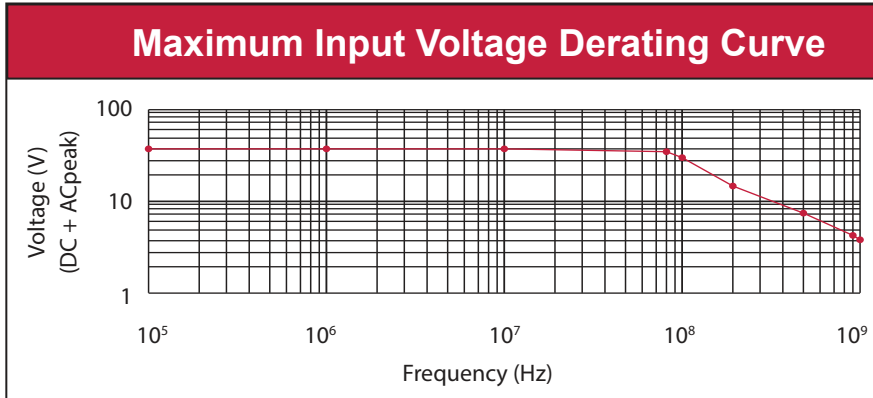


Figure 1 Maximum Input Voltage Derating Curve

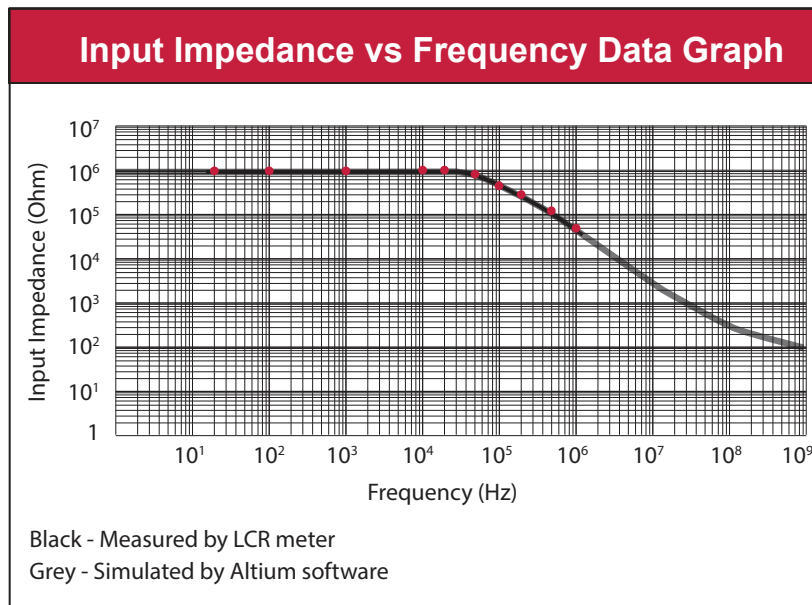


Figure 2 Input Impedance vs Frequency Data Graph

## Kit Contents:

- Active FET probe
- 50  $\Omega$  feed-through terminator (CT2944-50)
- USB power lead (CT4122)
- 9 V battery
- Offset adjustment tool
- User manual
- SMD kit
  - (2) SMD test clip, gray (CT3659-8)
  - (2) MicroLeads, 0.8 mm, Pin-Jack, 5 cm, Black/Red
  - (2) MicroLeads, 0.8 mm, Pin-Jack, 10 cm, Black/Red
  - (4) Ground pin, bent
  - (6) Test tip, uninsulated, 0.8 mm x 11.6 mm



Technical data subject to change.

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