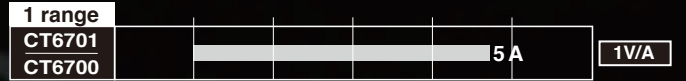
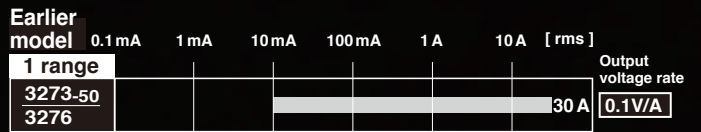


### *Capture Inrush, Micro and High-Speed Currents with a Single Probe*

3 full ranges of 30 A, 5 A, and 0.5 A deliver an expansive current measurement spectrum



CT6711 Frequency range

CT6710 Frequency range

**120 MHz**

**50 MHz**



**Easy range switching at the press of a button**

Choose the optimal range using the range keys on the relay box.

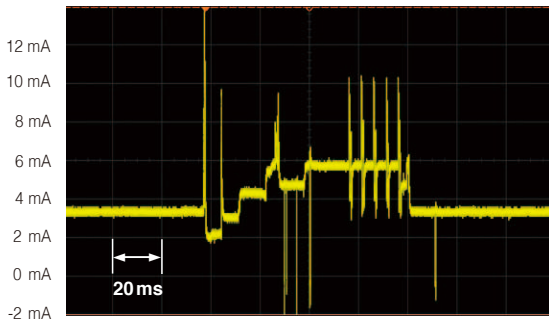
Analyze current under a broad range of operating conditions with a single instrument.

# 30A, 5A, 0.5A Range

**Observe micro current**

**0.5A 10V/A**

Current consumption waveform for a Bluetooth Low Energy device while sending/receiving data

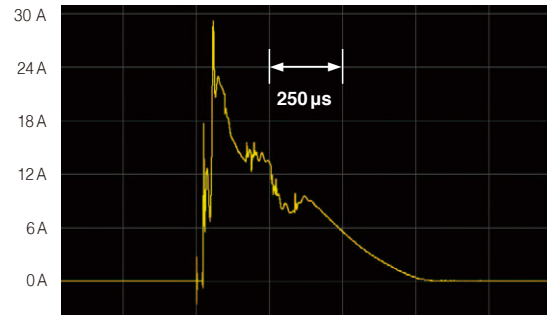


Instrument used: Oscilloscope  
Frequency band: 200 MHz

**Observe inrush current**

**30A 0.1V/A**

Inrush current waveform when an electric device is turned on



Instrument used: Memory HiCorder MR6000

**Built-in function to protect against excessive input**



**Warning indicator**

The warning indicator flashes to warn the user if a current in excess of the rated value is being input.

**Overload protection**

If you select the incorrect range and then input a current signal that exceeds the rated current for that range\*, this function protects the instrument from damage due to overheating.

\*Caution: Input currents that exceed the frequency derating for the 30 A range may cause measurement circuit damage before the protection function can operate.

**Instrument profile MEMORY HiCORDER MR6000**

200 MS/s × isolated measurement

When using the High-speed Analog Unit U8976  
(Frequency range: DC to 30 MHz)



Z5021

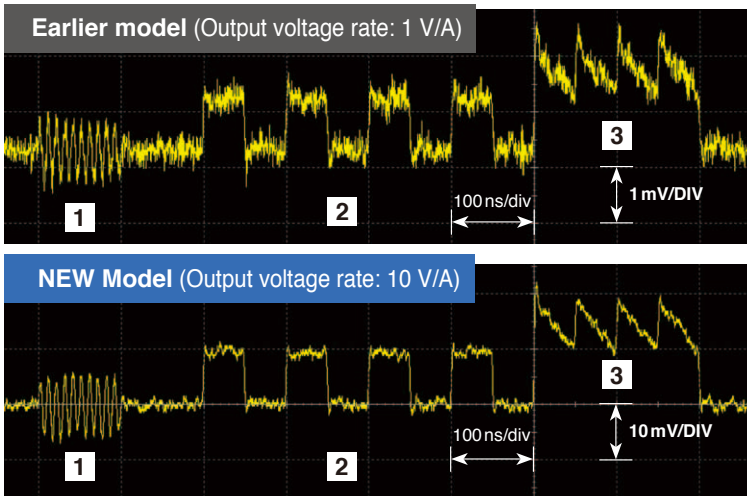
**PROBE POWER UNIT**

Connect up to four CT6710/CT6711 probes.

# Clear observation thanks to a high S/N ratio and 10x output rate

Direct waveform observation without needing to rely on your oscilloscope's filter settings and averaging function lets you capture micro currents more clearly thanks to the 10 V/A output rate.

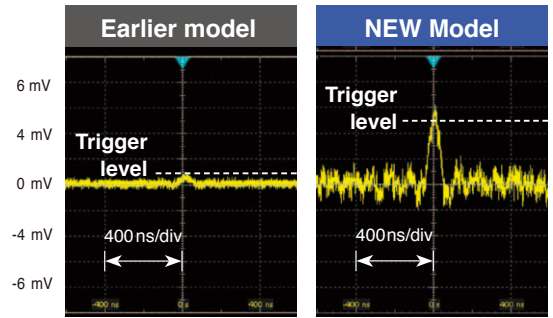
## Wide bandwidth and high sensitivity for more intuitive waveform display



By improving voltage sensitivity of the oscilloscope by a factor of 10, the S/N ratio of the oscilloscope itself is enhanced to deliver a cleaner waveform.

- 1 Sine wave: f=100MHz, 1 mA peak-peak
- 2 Square wave: f=10MHz, 1 mA peak-peak
- 3 Sawtooth wave: f=20MHz, 1 mA peak-peak (offset +1 mA)

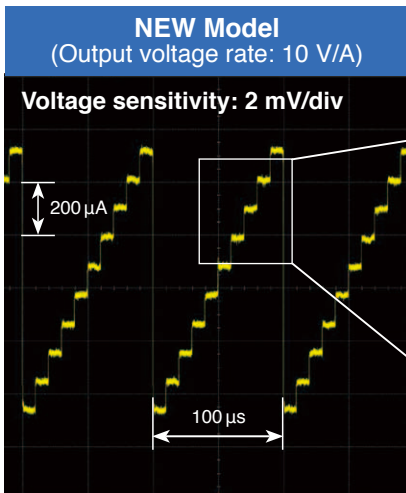
## Never miss important waveforms



Output voltage rate: 1 V/A    Output voltage rate: 10V/A

When monitoring for single-shot phenomena with an oscilloscope, even hard-to-trigger micro current waveforms buried in noise can be easily identified thanks to the high-sensitivity range with 10V/A output rate.

## Observe micro current on the order of several hundred microamperes (optimizing the averaging function)



Oscilloscope settings: Band limit of 20 MHz, 16x averaging, auto-trigger

### Observed waveform: 10 μs stepped waveform; repeating period: 100 μs

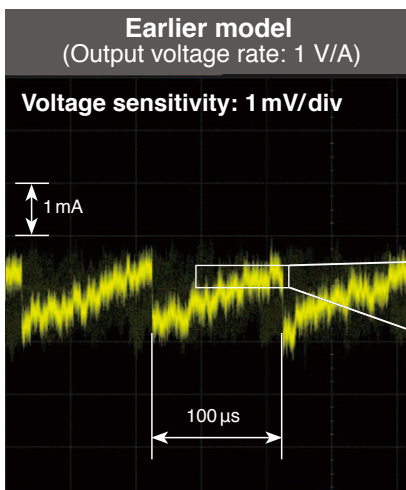
Review staircase waveforms in 100 μA steps.

Because oscilloscopes typically have a maximum voltage sensitivity of 1 mV/div., they can only display waveforms of up to 1 mA/div. when using the conventional 1 V/A output rate. However, the CT6710 and CT6711, which have an output rate of 10 V/A (in the 0.5 A range) can display waveforms at 100 μA/div.

CURRENT PROBE CT6711		Oscilloscope	
Usage range	Output voltage rate	Voltage sensitivity	Current sensitivity
0.5 A	10 V/A	2 mV/div	200 μA/div

### Key considerations when measuring micro currents

By using the oscilloscope's averaging function or band-limiting function when measuring a periodic micro current signal, you can eliminate random noise in the signal in order to observe the current waveform more clearly.



### Measuring variations in the same current signal as above at the conventional level of sensitivity

The waveform display is limited by the oscilloscope's resolution. It is difficult to view current fluctuations of less than 1 mA in a detailed manner.

Earlier model Current Probe		Oscilloscope	
Usage range	Output voltage rate	Voltage sensitivity	Current sensitivity
5 A	1 V/A	1 mV/div	1 mA/div

The signal is obscured by noise, and the trigger cannot be applied in a stable manner, so averaging is unable to function.

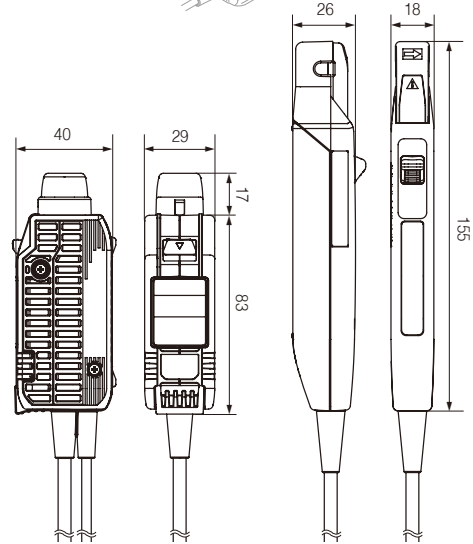
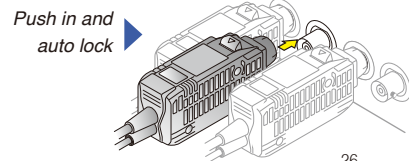
**Specifications** Accuracy guaranteed for 1 year. Post-adjustment accuracy guaranteed for 6 months

<b>Frequency range</b>	CT6710: DC to 50MHz (-3dB) CT6711: DC to 120MHz (-3dB)	
<b>Rise time (10% to 90%)</b>	CT6710: 7.0ns or less CT6711: 2.9ns or less	
<b>Delay time</b> (Delay time relative to an input signal with a rising time of 1 ns)	30A Range	Typical 12ns
	5A Range	Typical 12ns
	0.5A Range	Typical 13ns
<b>Maximum rated current</b> (Note frequency derating for DC and sine waves)	30A Range	30Arms
	5A Range	5Arms
	0.5A Range	0.5Arms
<b>Output voltage rate</b>	30A Range	0.1V/A
	5A Range	1V/A
	0.5A Range	10V/A
<b>Amplitude accuracy</b> (DC or 45 to 66 Hz sine wave, within maximum peak current for each range)	30A Range	±3.0% rdg. ±1 mV, Typical ±1.0% rdg. ±1 mV (≤10Arms)
	5A Range	±3.0% rdg. ±1 mV, Typical ±1.0% rdg. ±1 mV
	0.5A Range	±3.0% rdg. ±10 mV, Typical ±1.0% rdg. ±10 mV
<b>Maximum peak current</b>	30A Range	±50A peak (Maximum 2 sec input)*
	5A Range	±7.5A peak
	0.5A Range	±0.75A peak (<10MHz), ±0.3A peak (≥10MHz)
<b>Diameter of measurable conductors</b>	φ5 mm or less (Insulated conductors)	
<b>Noise</b> 0.5 A range, with a 20MHz bandwidth instrument	75 μA rms or less	
<b>Operating temperature and humidity range</b>	0 to +40°C (32 to 104 °F), 80% RH or less (no condensation)	
<b>Effect of external magnetic fields</b> DC or 60 Hz input, 400 A/m magnetic field	CT6710: 20 mA or less, CT6711: 5 mA or less	
<b>Cord lengths</b>	Sensor cord: 1.5 m (59.6 in), Power cord: 1.0 m (39.37 in)	
<b>External dimensions</b> Not including BNC connector or other protruding parts	<b>Sensor</b>	Approx. 155 mm (6.10 in)W × 18 mm (0.71 in)H × 26 mm (1.02 in)D
	<b>Junction box</b>	Approx. 45 mm (1.77 in)W × 120 mm (4.72 in)H × 25 mm (0.98 in)D
	<b>Termination unit</b>	Approx. 29 mm (1.14 in)W × 83 mm (3.27 in)H × 40 mm (1.57 in)D
<b>Mass</b>	Approx. 370 g (13.1 oz)	

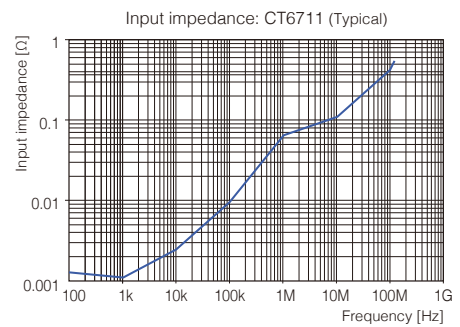
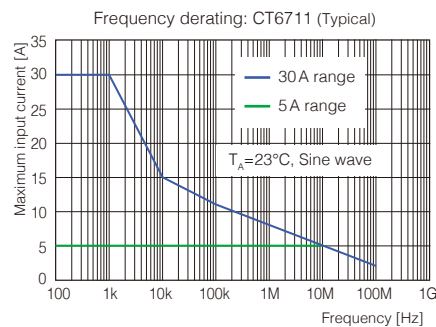
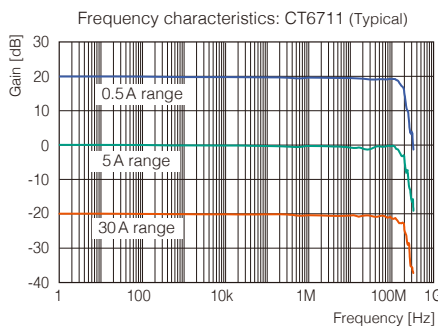
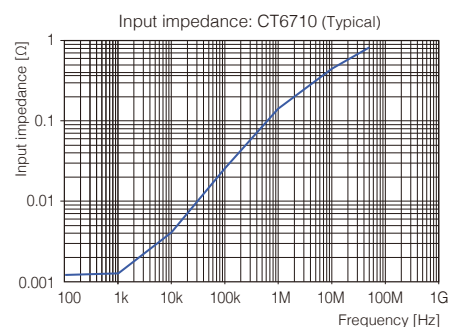
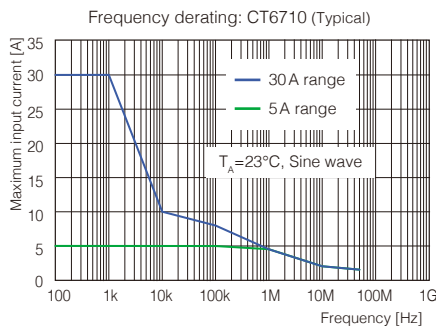
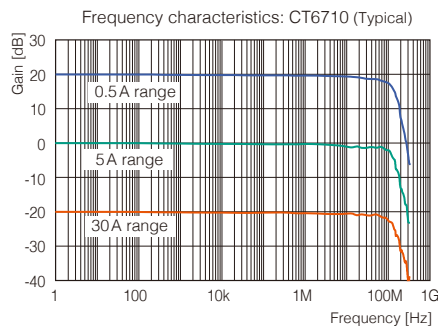
\* Refrain from use for at least 20 seconds after maximum peak current input due to generated heat

**One-touch Disconnection from the BNC Terminal**

The BNC connector does not need to be rotated when connecting to an oscilloscope or recorder. Insert the connector until it automatically locks into place. To disconnect it, just pull the unlock lever toward you.



Unit: mm



**Model: CURRENT PROBE CT6710, CT6711**

Model No. (Order Code)	Frequency range
CT6710	DC to 50 MHz
CT6711	DC to 120 MHz

**Option**

**POWER SUPPLY 3269**  
Connect up to two CT6710/CT6711 probes



Note: Company names and Product names appearing in this catalog are trademarks or registered trademarks of various companies.



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