

Current Sensor CS-CT1-3003A

Advanced TLP/HMM/HBM Solutions

1 Features

- Pulse current sensor
- Built-in Tektronix CT-1
- Three 50 Ω SMA ports
- 5 V/A sensitivity
- >1 GHz bandwidth
- <0.35 ns rise time
- High mechanical robustness

2 Description

The CS-CT1-3003A current sensor module is used to measure the pulse current in a 50 Ω transmission line. It can be used also as general purpose pulse current sensor. The device has three 50 Ω SMA ports. The Amp x Second rating is 1 A μs which results in maximum 10 A at 100 ns pulse width or 1 A at 1 μs pulse width. The sensitivity of the sensor is 5 V/A. The bandwidth is >1 GHz.

3 Electrical Characteristics

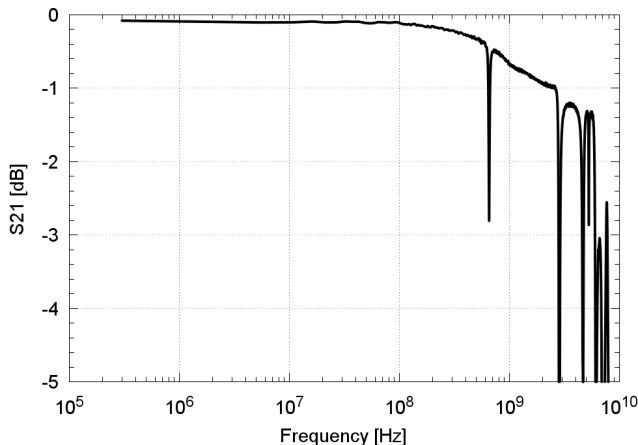


Figure 1: Typical frequency response (port 1 to port 2)

50 Ω SMA Pulse Force Input (Port 1): TLP pulse input. To be connected to DUT pulse force output of S-3000C DUT switch.

50 Ω SMA Pulse Force Output (Port 2): To be connected to the DUT.

50 Ω SMA Current Sensor Output (Port 3): To be connected to the oscilloscope input. The output signal of the sensor (Fig. 2) is $10^{(S_{31}/20)} \cdot 50 = 10^{(-20/20)} \cdot 50 = 5 \text{ V/A}$ into 50 Ω. Therefore it is a must to attenuate the current sensor output signal using an attenuator.

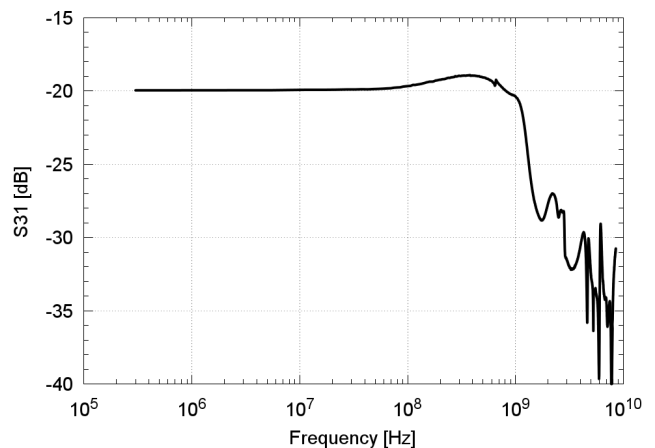
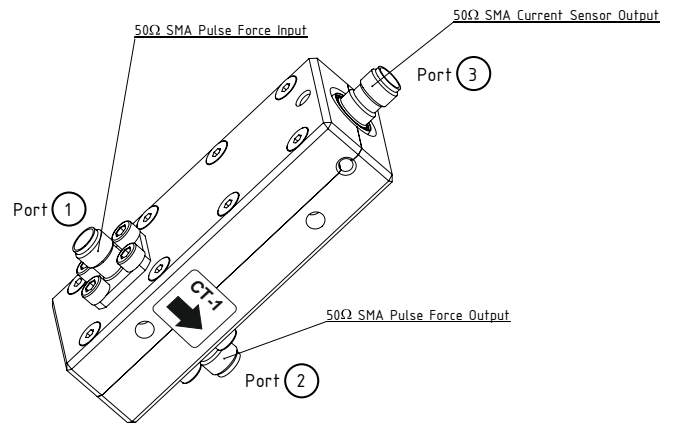


Figure 2: Typical output sensitivity port 3 (S31)

CAUTION: IF THE ATTENUATOR IS NOT USED THE OSCILLOSCOPE INPUT MAY BE DAMAGED AT TLP CURRENTS BEYOND 1 A.

Tektronix® CT-1® Current Sensor: Please download the latest datasheet of the CT-1 current sensor from the Tektronix homepage.

4 Ordering Information

Pos.	Description	Part No.
01	Current Sensor	CS-CT1-3003A

General

The product data contained in this data-sheet is exclusively intended for technically trained staff. You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. Our products are solely intended to be commercially used internally and should not be sold to consumers. This data-sheet is describing the specifications of our products for which a warranty is being granted by HPPI GmbH. Any such warranty is granted exclusively pursuant to the terms and conditions of the respective supply agreement. There will be no guarantee of any kind for the product and its specifications. For further information on technology, specific applications of our product, delivery terms, conditions and prices please contact HPPI:

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