

## **CDG CMP-45**

### Current monitoring probe

10 kHz - 400 MHz | For cable diameter up to 45 mm



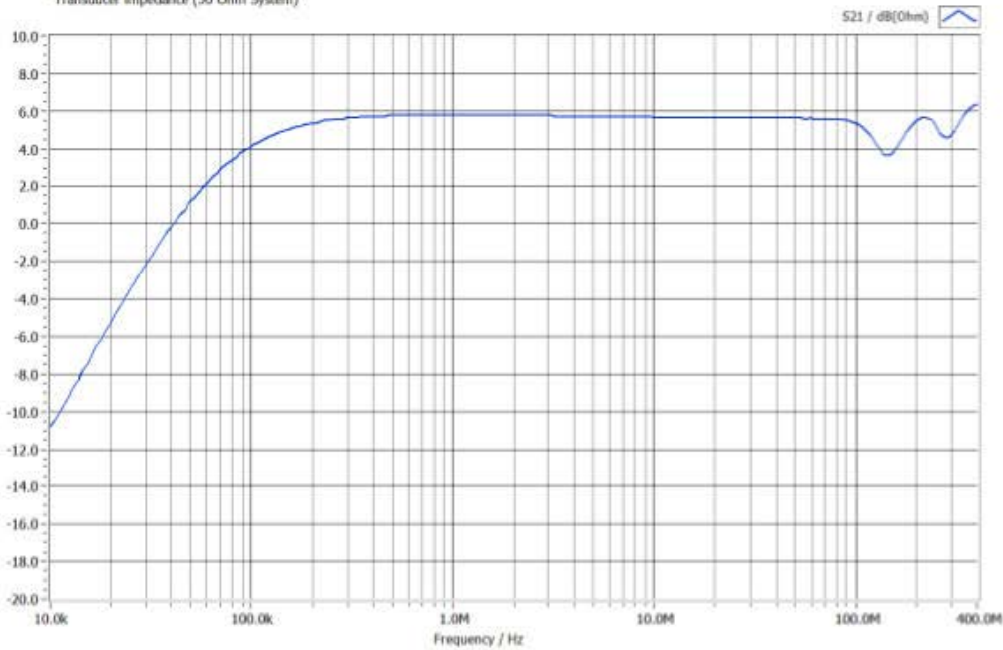
Current Monitoring Probes may be used whenever RF current measurements are required. The current carrying conductor can be easily positioned inside the central opening of the CDG CMP-45 by opening its foldable "door" and measuring the probe's output voltage with an RF detector. The calibration of the probe allows the conversion of the voltages measured to current over the frequency range shown in the individual transfer impedance curve supplied with each probe. There is virtually no loading applied on the circuit and thus a normal operation of the device under test (DUT) during the measurements is possible.

The CDG CMP-45 can be used for the clamp injection procedure when the common-mode impedance requirements cannot be met as described in chapter 7.4 of IEC/EN 61000-4-6 (Immunity to conducted disturbances induced by radio frequency fields). It can also be used as current monitor for BCI testing acc. to ISO 11452-4, MIL-STD-461, RTCA/DO-160 section 20 and various automotive standards.

- Frequency range 10 kHz to 400 MHz
- Easy positioning of the conductor / cable
- Cable diameters up to 45 mm
- As required in IEC / EN 61000-4-6
- Suitable for BCI testing (ISO 11452-4, MIL-STD-461, RTCA/DO-160 section 20 and various automotive standards).

## Typical transducer impedance

Network Analyser HP8751A (S.-No.: 3315301756), Test Set 87512A (S.-No. MY43100614)  
 Current transformer CDG CMP-45  
 Transducer impedance (50 Ohm System)

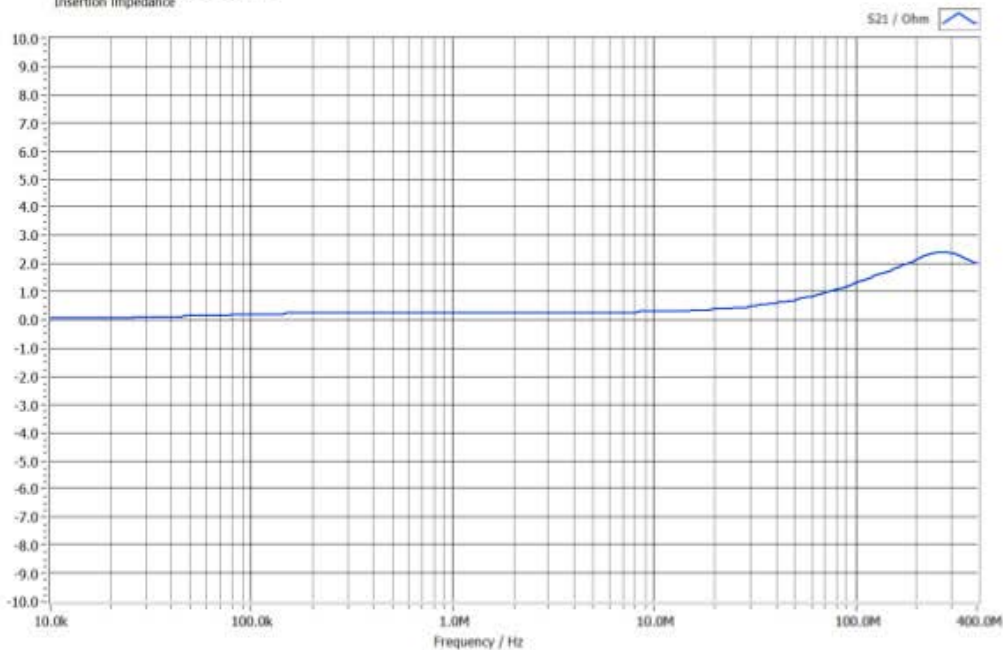


$$I \text{ dB}\mu\text{A} = V_p \text{ dB}\mu\text{V} - Z_t \text{ dB}\Omega;$$

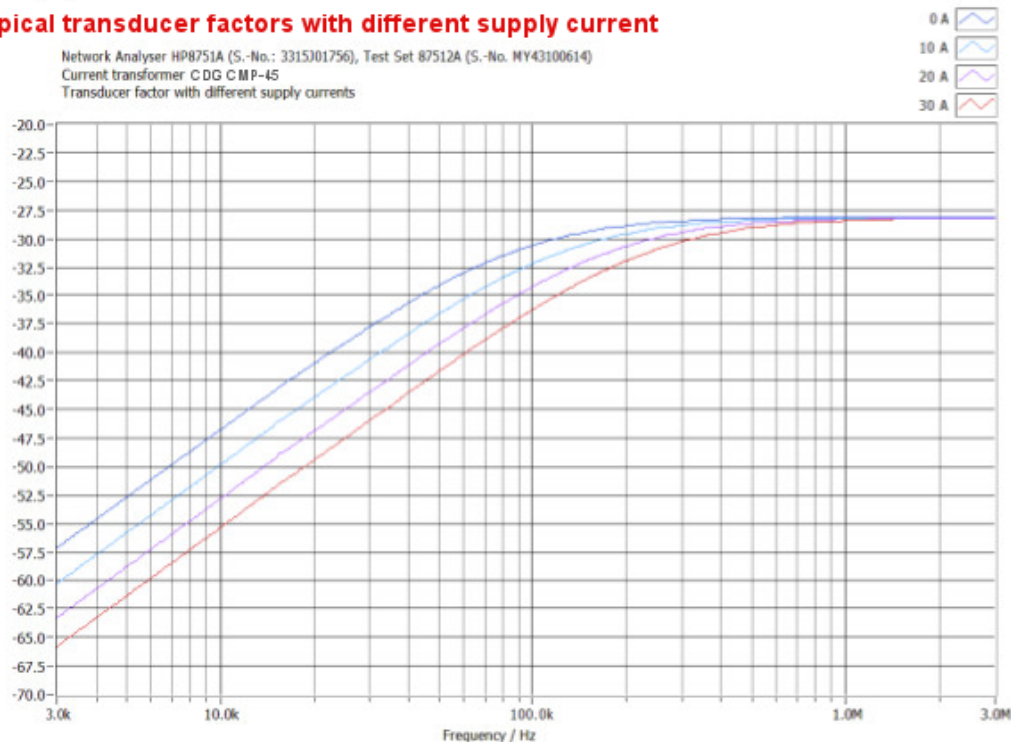
I = current;  $V_p$  = measured voltage;  $Z_t$  = receiver input impedance

## Typical insertion impedance

Network Analyser HP8751A (S.-No.: 3315301756), Test Set 87512A (S.-No. MY43100614)  
 Current transformer CDG CMP-45  
 Insertion impedance



## Typical transducer factors with different supply current



The CDG CMP-45 current monitoring probe measures RF common mode currents (asymmetrical currents) on single conductors or conductor bundles. Depending on the low frequency, current saturation effects may occur, which shift the lower frequency characteristics to somewhat higher frequencies. Only the sum of currents under consideration of sign is of importance, therefore complete conductor bundles are less critical than single conductors. To estimate the saturation effects, transducer factors are given for different low frequency currents.

Parameter	Specification
Frequency range	10 kHz – 400 MHz
Insertion impedance	< 2,5 Ohm
Cable diameter	< 45 mm
Signal output	BNC socket
Max signal current (10 kHz - 400 MHz)	1 A
Physical Characteristics	
Dimensions	Outer diameter 115 mm Thickness 30mm Overall length 136mm
Weight	0,55 kg