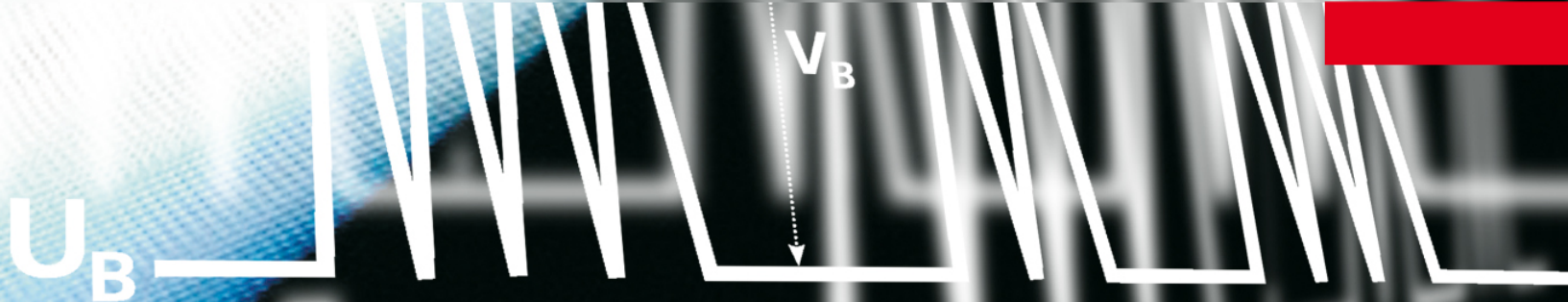


NSG 4070

# Conducted Immunity Testing IEC 61000-4-6



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# NSG 4070 Functions

$$s(q_k) = \sqrt{\frac{1}{n-1} \sum_{k=1}^n (q_k - Q)^2}$$

Signal generator  
9 kHz - 1 GHz

Modulator  
AM, PM, external

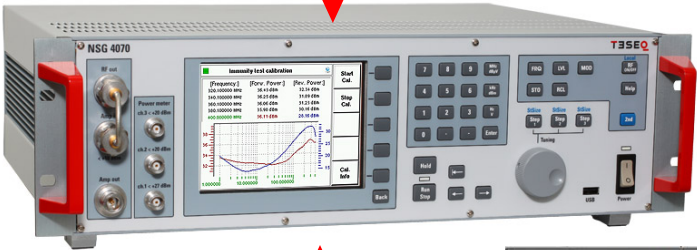
Power amplifier:  
several models  
35 W, 150 kHz to 230 MHz;  
40 W, 10 kHz to 400 MHz  
45 W, 9 kHz to 1 GHz;  
80 W, 150 kHz to 230 MHz

3 power meters:  
9 kHz - 1 GHz

Version with internal amplifier:  
(additional power meter inside and  
built-in directional coupler)

EUT monitoring:  
8 inputs, 4 outputs

Remote connection:  
LAN,  
USB,  
optical RS232 (connected to  
the USB port of the PC),  
electr. RS232



Monitoring Setup					
	High / Low	Ask	Stop	Register	
User Port 1	High	X	X	X	X
User Port 2	High	X	X	X	X
User Port 3	High	X	X	X	X
User Port 4	High	X	X	X	X
Digital 1	High	X	X	X	X
Optical Input	High	X	X	X	X
Operator(space key)		X	X		✓
Analog Input					
Ttp < 3	or > 7	V	X	X	X
Power Meter					
PWMT	X	PM02	X	PM03	X
User Port OUT					
	High / Low	D3	D2	D1	D0
Missed Event	Low	X	X	X	X
Every Stop	Lowimp	X	X	X	X
at F1: 100.00000	Low	X	X	X	X
at F2: 100.00000	Low	X	X	X	X
at Test Start	Lowimp	X	X	X	X

$$s(q_k) = \sqrt{\frac{1}{n-1} \sum_{k=1}^n (q_k - Q)^2}$$

## Features



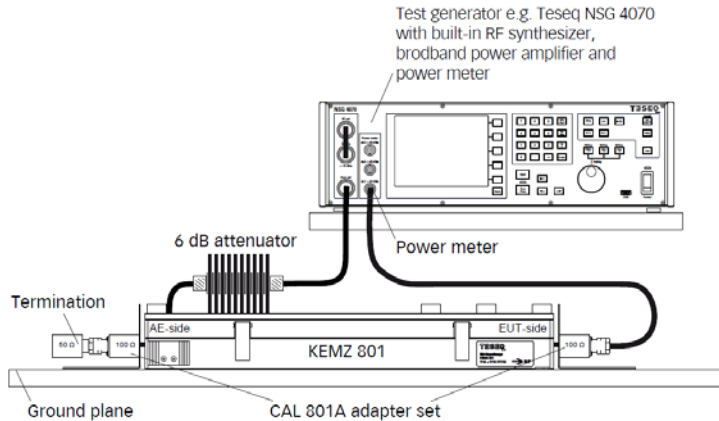
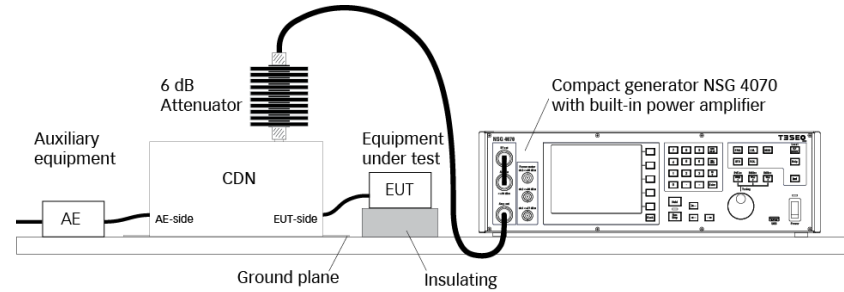
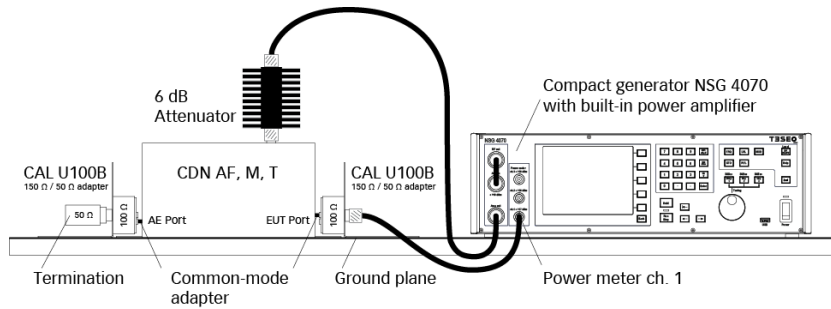
- Integrated signal generator 9 kHz - 1 GHz
- Modulation (1 Hz to 50 kHz) AM, AM PC (Automotive), PM or via external input
- Power meters (4 channels, thereof 1 for internal use)
- Use of external amplifiers and directional couplers possible
- 5,7" TFT color display as well as hard and soft keys for easy stand alone operation
- Multiple EUT monitoring options
- Several integrated power amplifier modules available

$$s(q_k) = \sqrt{\frac{1}{n-1} \sum_{k=1}^n (q_k - Q)^2}$$



- Induced RF fields IEC 61000-4-6
- RF fields up to 1 GHz: IEC 61000-4-3, IEC 61000-4-20, IEC 61000-4-21
- BCI: ISO 11452-4, MIL-STD-461 CS114, Ford FMC1278, GM GMW3097, Nissan 28400NDS, Peugeot PSA B21 7110, Renault 36-00-808 ...
- And others

# $s(q_k) = \sqrt{\frac{1}{n-1}}$ Typical setups for IEC/EN 61000-4-6

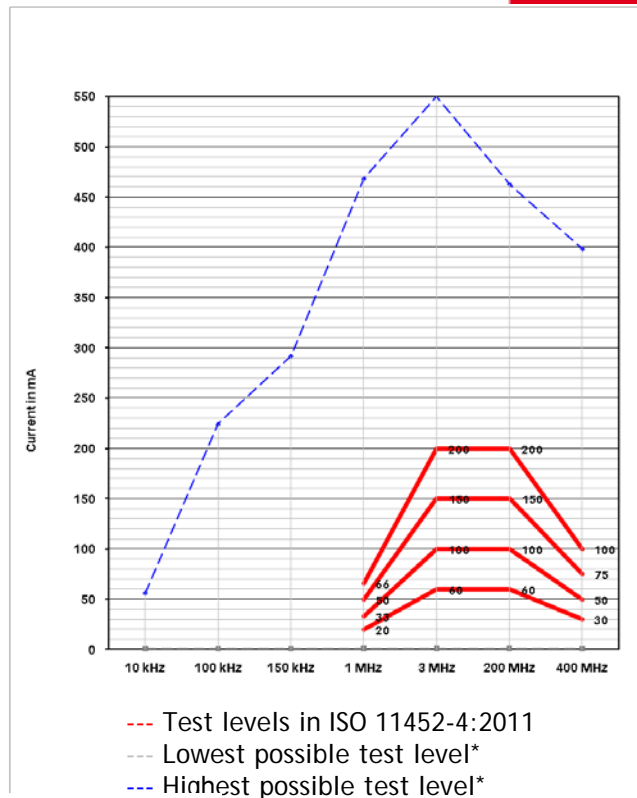
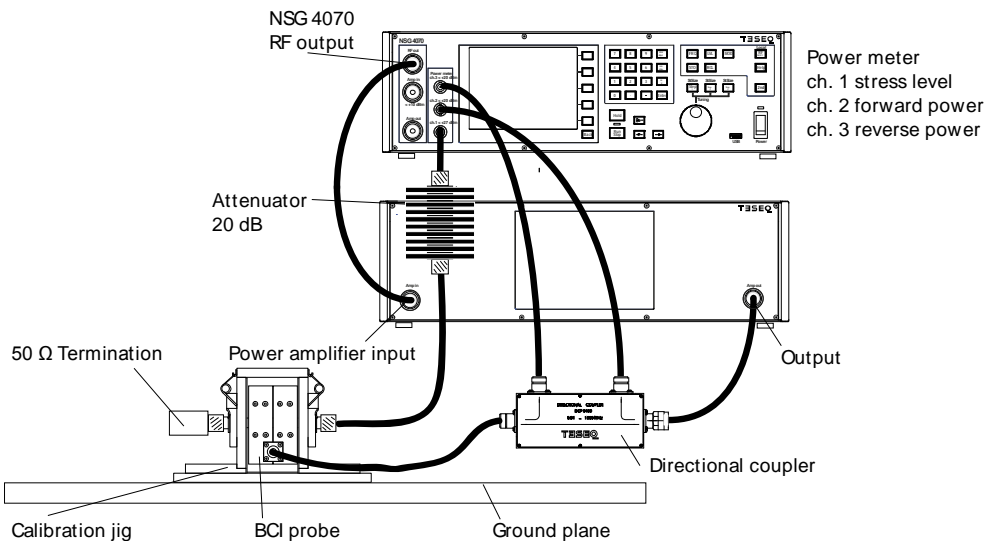


$$s(q_k) = \sqrt{\frac{1}{n-1} \sum_{k=1}^n (q_k - \bar{q})^2}$$

# BCI testing with NSG 4070B



## BCI calibration set-up:



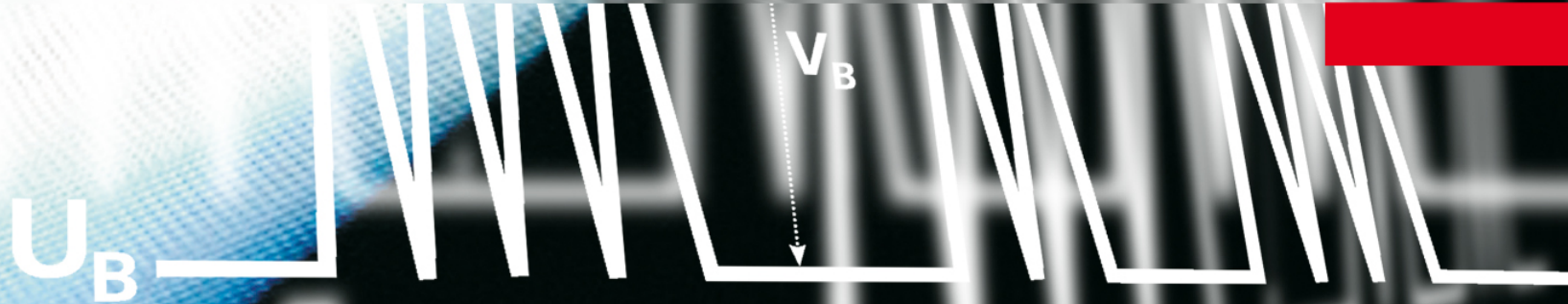
\*) NSG 4070B + 40 dB directional coupler + 100 Watt amplifier + CIP 9136 + 20 dB on channel 1

$$s(q_k) = \sqrt{\frac{1}{n-1} \sum_{k=1}^n (q_k - Q)^2}$$

## Advantages NSG 4070



- Compact generator which replaces a couple of standalone units with no technical disadvantage but more value for money
- USP against other compact generators
  - ✦ Class A amplifier (forward power is independent of the load's impedance)
  - ✦ Back to forward power controlling (improves systems linearity)
  - ✦ Saturation check implemented
  - ✦ Report generator which is based on templates (time advantage)
  - ✦ Multiple EUT monitoring with 8 inputs and 4 outputs (flexibility, time advantage)



Thank you!