ESA1 set
Emission Development System

Short description

The ESA1 is a system of EMC tools for measuring the interference of assemblies and devices. The CS-ESA software allows the developer to quickly and comprehensively suppress interference affecting the DUT. Interference measurements taken during the development stage with ESA1 are proportional to the results from far-field measurements or from measurements with artificial networks. With the ESA1 tools disturbance sources can be localized, effects can be detected, and EMC measures individually determined. The effects of improvements implemented by ESA1 are proportional to the results from far-field measurements. ESA1 is designed for use at the developer's working place.

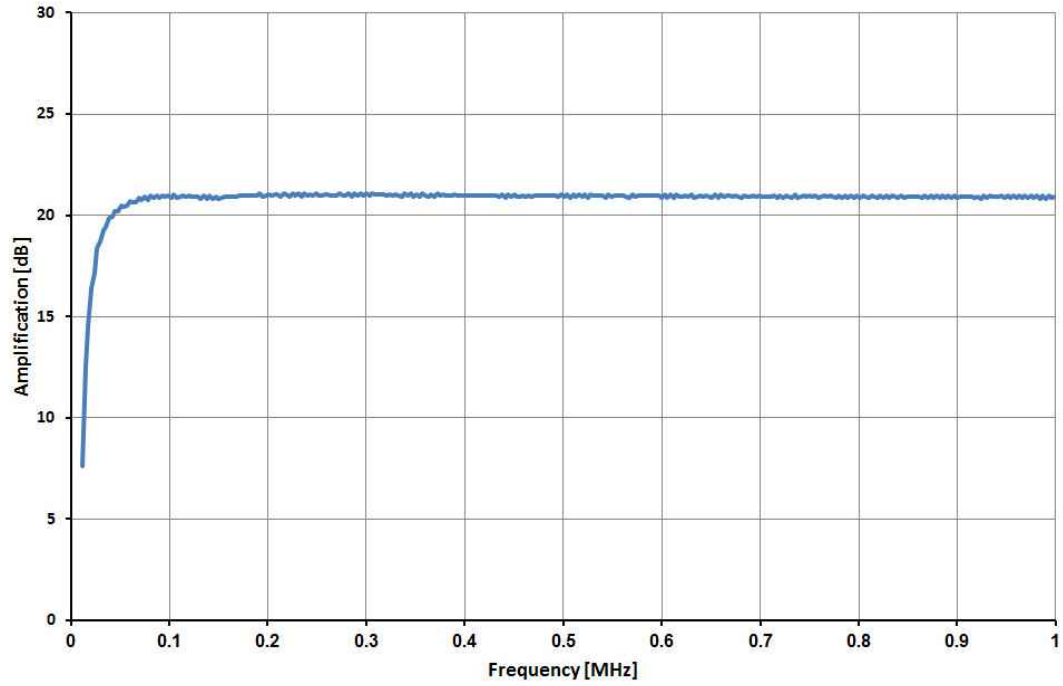
Scope of delivery

1x CS-ESA set, ChipScan-ESA Software / USB
1x HFW 21, RF Current Transformer
1x Z23-1 set, Shielding Tent (900 x 500x 400) mm
1x RF-B 0.3-3, H-Field Probe mini 30 MHz up to 3 GHz
1x RF-E 02, E-Field Probe 30 MHz up to 1.5 GHz
1x RF-E 10, E-Field Probe 30 MHz up to 3 GHz
1x RF-R 3-2, H-Field Probe 30 MHz up to 3 GHz
1x RF-R 400-1, H-Field Probe 30 MHz up to 3 GHz
1x RF-U 5-2, H-Field Probe 30 MHz up to 3 GHz
1x ESA1 case, System case
1x Dongle, Licence Dongle
1x HFA 21, RF Bypass
1x PA 203 BNC, Preamplifier 100 kHz up to 3 GHz
1x RF-B 3-2, H-Field Probe 30 MHz up to 3 GHz
1x RF-E 05, E-Field Probe 30 MHz up to 3 GHz
1x RF-R 0.3-3, H-Field Probe mini 30 MHz up to 3 GHz
1x RF-R 50-1, H-Field Probe 30 MHz up to 3 GHz
1x RF-U 2.5-2, H-Field Probe 30 MHz up to 3 GHz
1x ESA1 acc, Accessories
1x ESA1 m, User Manual

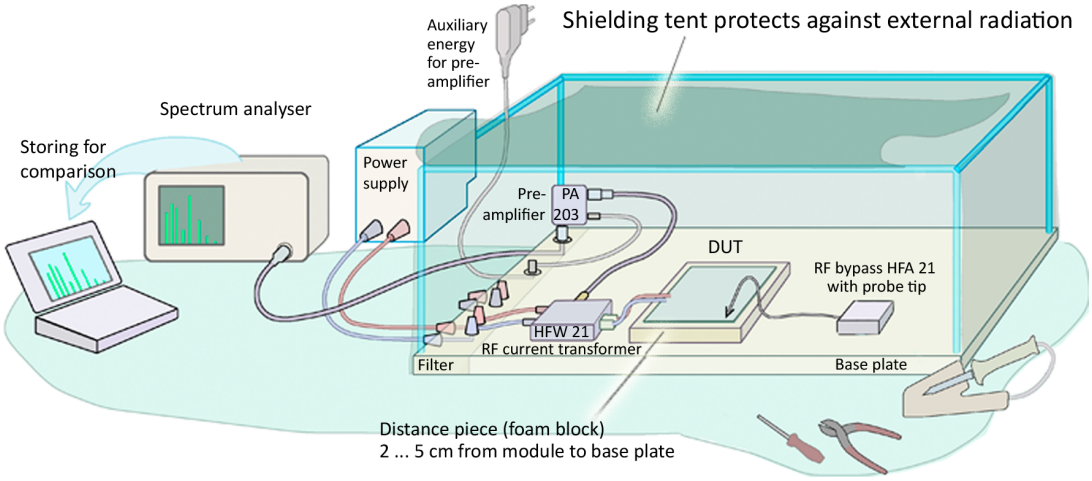
Technical parameters

HFW 21 RF Current Transformer	
Frequency range	100 kHz - 1 GHz
Continuous power rating	
Current	10 A
Dielectric strength	50 V
Sizes (L x W x H)	(135 x 32 x 28) mm
HFA 21 RF Bypass	
Capacitances	10 pF ... 100 nF
Dielectric strength	50 V
Shielding tent (900x500x400 mm)	
Attenuated shielding	45 dB - 50 dB / 30 MHz - 1GHz
Sizes (L x W x H)	(900 x 500 x 400) mm
Weight	12 kg
Near Field Probes	
Frequency range	30 MHz - 3 GHz
CS-ESA software	
Operating system	Windows XP/Vista/7 (latest service packs)
PA 203 preamplifier	
Frequency range	100 kHz - 3 GHz
Amplification	20 dB
Supply voltage	12 V DC
Current input	50 mA
Max. input power	+13 dBm

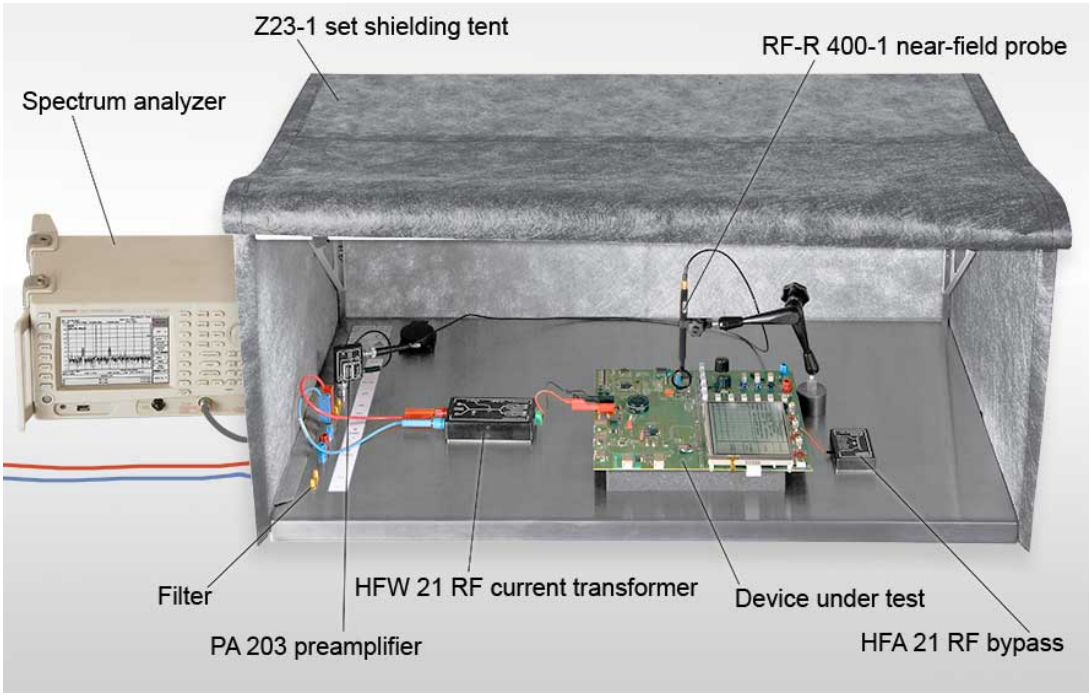
Frequency response (detail)



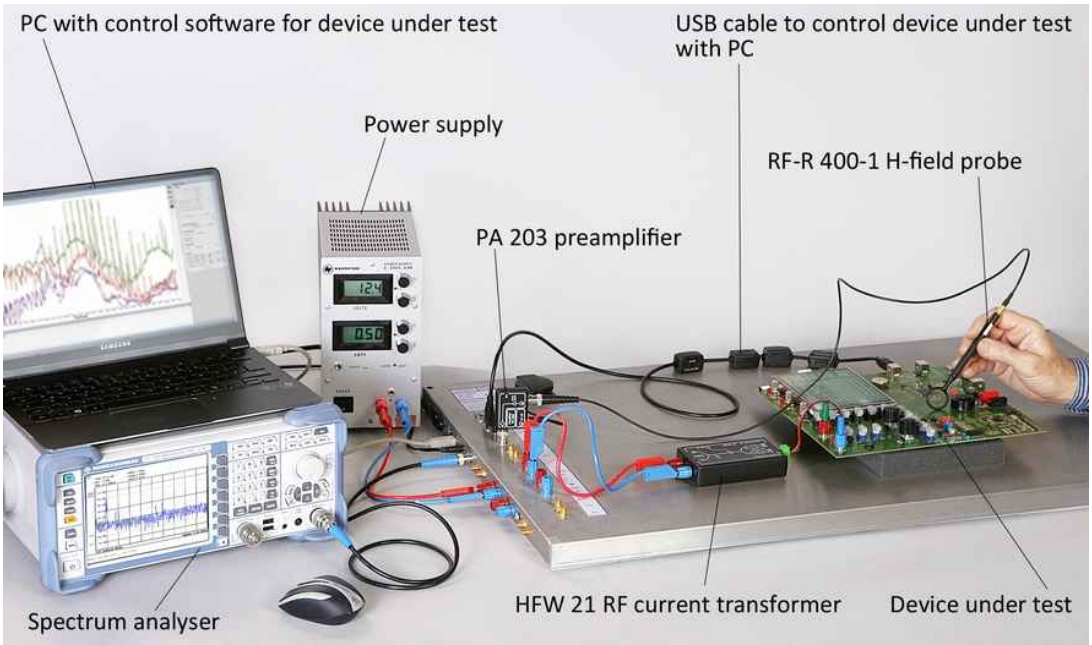
Scheme ESA1



Measurement set-up ESA1



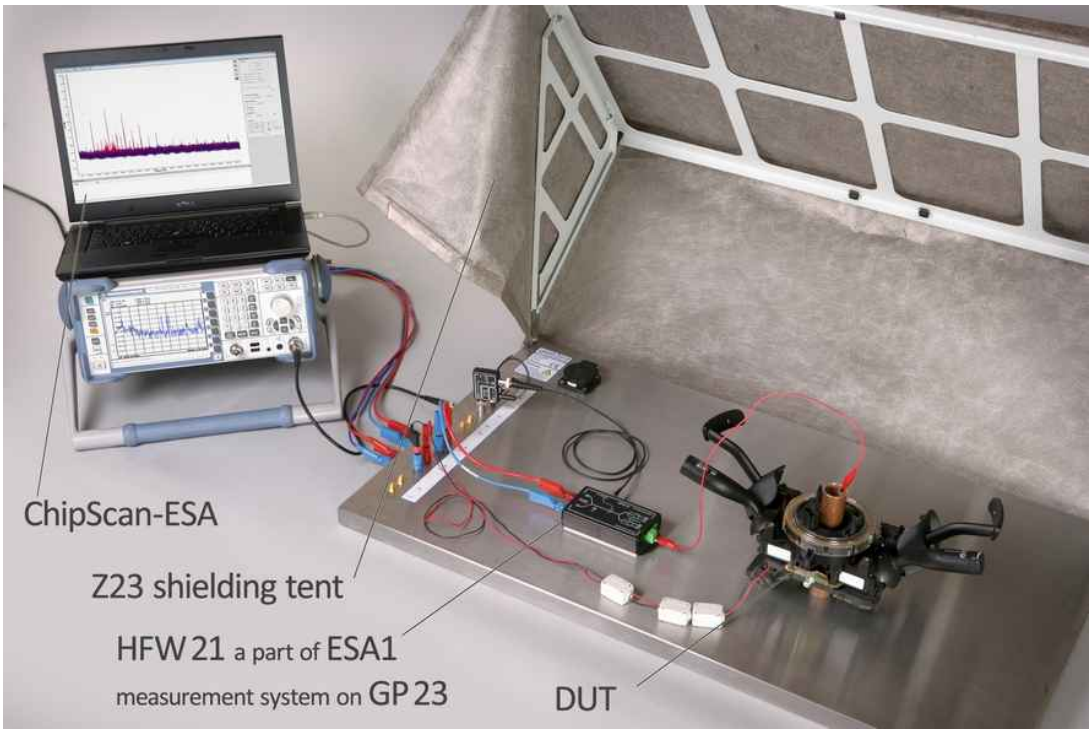
Application with RF-R 400-1



Scope of delivery ESA 1k

ESA1 probes

Application with HFW 21



ESA Shielding tent