

R&S®FPC recommended EMI debugging solution

Excellent for EMI debugging during development and verification

Problem

■ Electromagnetic compatibility (EMC) testing is important to ensure a device does not emit unacceptable emissions. These could cause performance degradation to other electronic devices or disturb over-the-air signal transmissions. It is regulated through a number of standards, and electronic devices must be certified in accordance with these standards in order to launch them on the market. Fixing issues on a final product after a failed EMC compliance test slows down the development cycles and increases the cost of development and testing.

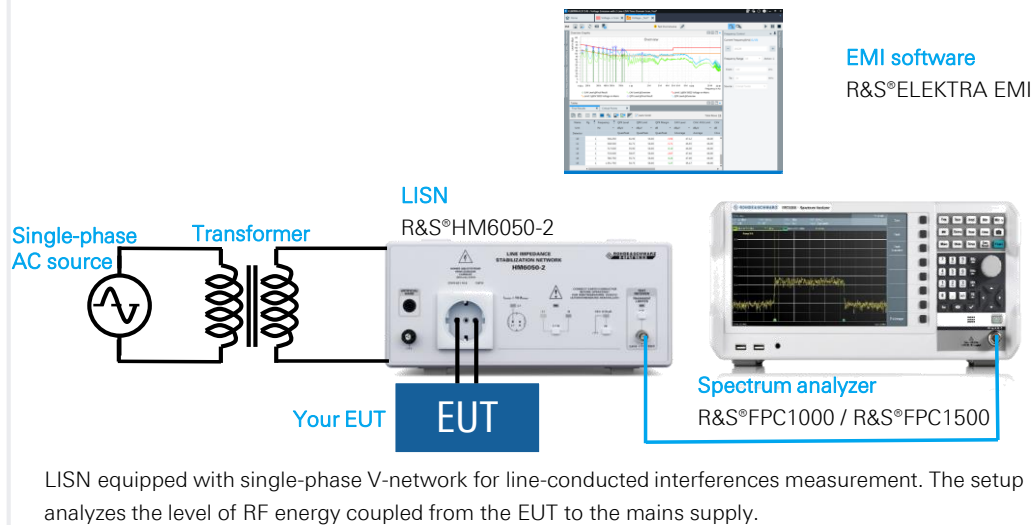
Solution

■ It is much cheaper and faster to fix EMI issues as early as possible in the product lifecycle: during development. The Rohde & Schwarz recommended EMI debugging solution enables customers to locate, analyze and eliminate EMI issues **before** they become a showstopper during compliance testing. The solution bundle consists of hardware and software that is specifically designed to measure both conducted and radiated emissions.

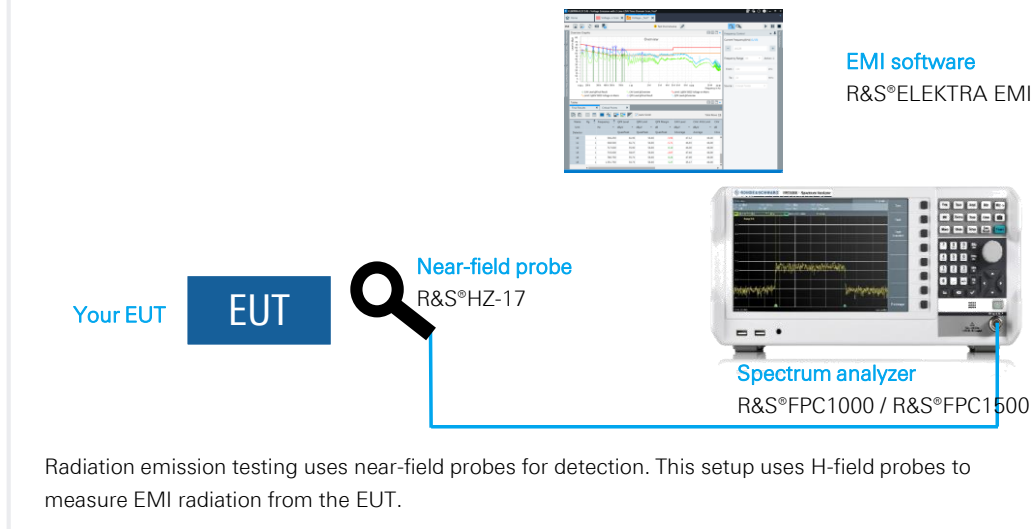


Your benefit	Features
Affordable R&S®FPC1000 spectrum analyzer with excellent performance	<ul style="list-style-type: none">■ Excellent RF performance: noise level with preamplifier on: -165 dBm (typical)■ Resolution bandwidth (CISPR): 200 Hz / 9 kHz / 120 kHz / 1 MHz■ Resolution bandwidth (-3 dB): 1 Hz to 3 MHz■ Detectors: maximum peak, average, RMS, quasi-peak■ Spectrogram function to visualize interferers
Easy to use R&S®ELEKTRA EMI software that supports the measurement of both conducted and radiated emissions	<ul style="list-style-type: none">■ Clear configuration of the spectrum analyzer with reliable recording, analysis and documentation of measurement results■ Automated line selection for LISNs■ Interactive and semi-automatic emission measurements for EMI debugging and precertification■ Flexible report configuration for different layouts
One-stop shopping with Rohde & Schwarz	R&S®ELEKTRA EMI software controls the R&S®FPC and R&S®HM6050-2 for signal processing and LISN switching, respectively

Conducted emission setup



Radiated emission setup



► For more information, see www.rohde-schwarz.com/catalog/fpc

Specification in brief

Spectrum analyzer

Specification	R&S®FPC1000 / R&S®FPC1500
Frequency range	5 kHz to 1/2/3 GHz
DANL	typ. -165 dBm with preamplifier
TOI	meas. +7 dBm
Important configuration	
Option	R&S®FPC-K43 receiver mode with quasi-peak detector

Line impedance stabilization network

Specification	R&S®HM6050-2
Frequency range	9 kHz to 30 MHz
Max. current	16 A
Line voltage / frequency	230 V / 50 Hz to 60 Hz
Characteristic impedance	$Z = 50 \Omega / (50 \mu\text{H} + 5 \Omega)$, error < 20 % under terms of VDE 876T1
Important configuration	
Option	US version: R&S®HM6050-2US EU version: R&S®HM6050-2D UK version: R&S®HM6050-2UK

Near-field probes

Specification	R&S®HZ-17
Frequency range	30 MHz to 3 GHz
Type	two H-field probes
Important configuration	
Option	standard

External software

Important configuration	R&S®ELEKTRA
Software	R&S®ELEMI-E
License dongle	R&S®EMCPC