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	 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	 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

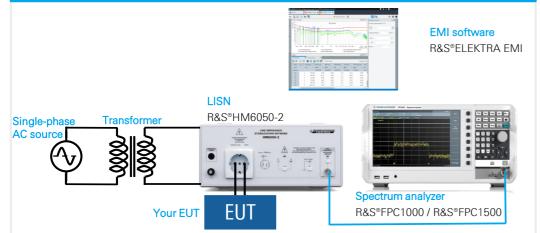




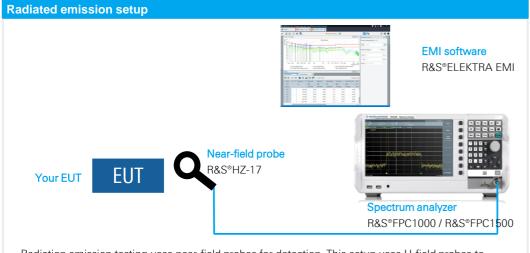
EMI Debuggin ecommended solutio

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Conducted emission setup



LISN equipped with single-phase V-network for line-conducted interferences measurement. The setup analyzes the level of RF energy coupled from the EUT to the mains supply.



Radiation emission testing uses near-field probes for detection. This setup uses H-field probes to measure EMI radiation from the EUT.

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

see <u>www.ronde-schwarz.com/catalog/rpc</u>

Rohde & Schwarz GmbH & Co. KG | Europe, Africa, Middle East +49 89 4129 12345 | North America 1 888 TEST RSA (1 888 837 87 72) Latin America +1 410 910 79 88 | Asia Pacific +65 65 13 04 88 | China +86 800 810 82 28 / +86 400 650 58 96 www.rohde-schwarz.com | customersupport@rohde-schwarz.com

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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	$Z = 50 \ \Omega \ / \ (50 \ \mu H \ + \ 5 \ \Omega), \ error \\ < 20 \ \% \ under \ terms \ of \ VDE \\ 876T1$		
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		
Туре	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