

R&S®FPL1-K54 EMI Measurement Application

Detecting and eliminating electromagnetic interference



Max. peak detector-based signal sweep (top) and quasi-peak detector-based disturbance maxima analysis (bottom)

The perfect choice for

Detection and analysis of unwanted emissions (radiated or conducted)

EMI precompliance testing in line with commercial, automotive, avionic and military standards (CISPR, EN, FCC, DO-160, MIL-STD-461)

Key specifications

EMI filters (6 dB)	CISPR 16-1-1: 200 Hz, 9 kHz, 120 kHz, 1 MHz MIL-STD-461: 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz
EMI detectors (CISPR 16-1-1)	quasi-peak, CISPR-average, RMS-average
Number of meas. markers	1 to 16

Your benefit	Features
Fast and reliable disturbance detection	automatic disturbance maxima detection and analysis with CISPR detectors
Smooth EMI certification process	RBWs and detectors in line with CISPR 16-1-1 and MIL-STD-461

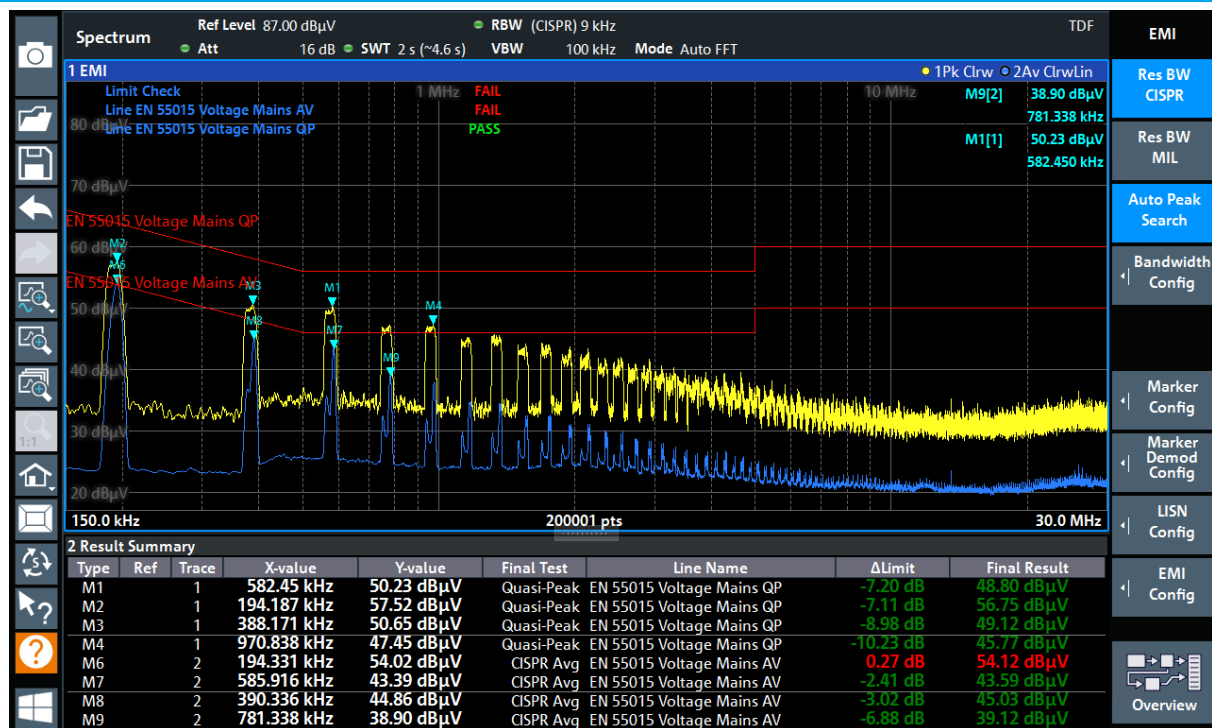
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The R&S®FPL1-K54 EMI measurement application adds EMI diagnostic functionality to the R&S®FPL signal and spectrum analyzer. It is the ideal tool for debugging and precompliance applications.

- Emission measurements in line with EMI standards
- Extensive limit line library for quick pass/fail decisions
- Transducer factor library with correction value tables for EMI accessories (LISNs, antennas, clamps, preamplifiers, cables and attenuators)
- Remote control of line impedance stabilization networks (LISN) from Rohde & Schwarz with the R&S®FPL1-B5 option
- Acoustic analysis using FM and AM signal demodulation with the R&S®FPL1-B5 option
- Logarithmic spectrum display
- Measurement automation: signal sweep with max. peak detector and subsequent disturbance maxima analysis with CISPR detectors

► For more information, visit www.rohde-schwarz.com/catalog/FPL1000

Example of emission analysis: voltage mains measurement of a lamp



Two detectors are used for the sweep: positive peak (yellow curve) and average (blue curve). Pass/fail information is given according to the defined limits (red lines). The identified maxima (“Auto Peak Search”) are automatically measured using the related CISPR detectors (quasi-peak and average) and listed in the results table. The final pass/fail status is clearly shown. The R&S®FPL applies the correction values (transducer factor) of the used LISN to the measurement results.

Model configuration information

Product	Name
R&S®FPL1003	Signal and spectrum analyzer, 5 kHz to 3 GHz
R&S®FPL1007	Signal and spectrum analyzer, 5 kHz to 7.5 GHz
Required options	
R&S®FPL1-K54	EMI measurement application
R&S®FPL1-B5	Additional interfaces (required for audio demodulation and LISN remote control)
Recommended option	
R&S®FPL1-B22	RF preamplifier