

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)

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

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 |

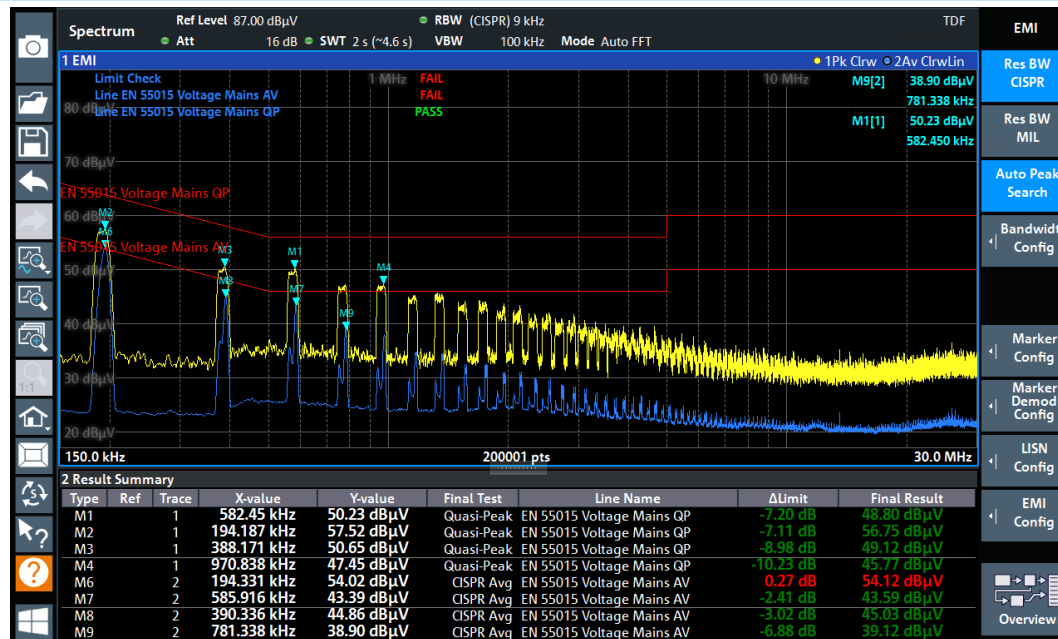
| Your benefit | Features |
|---|--|
| Fast and reliable disturbance detection | automatic disturbance maxima detection and analysis with CISPR detectors |
| Smooth EMI certification process | RBWs and detectors in line with CISPR 16-1-1 and MIL-STD-461 |

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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

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 |