Make ideas real



R&S®ESL EMI RECEIVER

Compact, cost-effective measuring receiver



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The R&S®ESL EMI test receiver combines two instruments in one, measuring EMC disturbances in line with commercial standards and also serving as a full-featured spectrum analyzer for diverse lab applications. The R&S®ESL is designed to meet the needs of cost-conscious users who want to perform diagnostic and precompliance EMI measurements up to 3 GHz or 6 GHz.

The perfect choice for

EMI measurements & debugging of commercial products	EMC labs
Standard RF spectrum measurements	Development & mobile users

Key specifications	
Frequency range	up to 50 GHz
Measurement range	-70 dBm to +23 dBm
Amplitude accuracy	0.5 dB
1 dB compression	+5 dBm
RF input pulse-resistant	up to 10 mWs
Displayed average noise level with preamplifier	<-152 dBm (1 Hz)
Resolution bandwidths	10 Hz to 10 MHz (–3 dB), 200 Hz, 9 kHz, 120 kHz (–6 dB), 1 MHz (impulse)

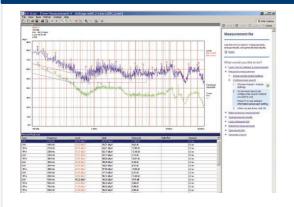
Your benefit	Features
EMI measurements	 ▶ Very good RF characteristics ▶ Frequency range covering the most important EMI measurements in commercial product standards ▶ All CISPR weighting detectors included ▶ All major functions of an advanced EMI test receiver, including fully automated EMI test sequences
Compact and mobile	 Rugged case as standard Compact size Lightweight Optional battery operation for installation, maintenance and on-site applications
Standard RF spectrum measurements	► Complete functionality of an R&S®FSL3/R&S®FSL6 spectrum analyzer included

Test receiver and spectrum analyzer function



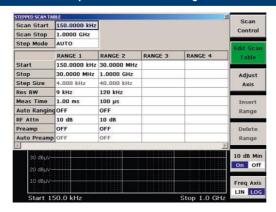
Menu for selecting weighting detectors. Values produced by a maximum of four different detectors are simultaneously displayed, both numerically and as an analog bargraph

Diagnostic measurements made easy with ES-SCAN



Preview measurement (Pk and Avg) with determination of the local maxima (here, 25 subranges) for subsequent final measurement (QP and C-Avg).

Individual receiver parameters set for subranges



In receiver mode, the R&S®ESL is tuned in fixed frequency steps in accordance with the settings in the SCAN table. The SCAN table can be programmed for a maximum of ten frequency subranges with independently selectable parameters.

Evaluation of critical disturbance frequencies list

Frace1: EN5501	1F	Trace2: Limit	Line not assign	ed	Automation
race/Detector	Frequency /	Level dBµV/m	DeltaLimit	_	
l Pos. Peak	126.8000 MHz	43.94	13.9 dB	-	Peak
l Pos. Peak	127.8800 MHz	44.41	14.4 dB		Search
l Pos. Peak	131.6800 MHz	50.63	20.6 dB		
l Pos. Peak	132.0000 MHz	45.57	15.6 dB		Edit
l Pos. Peak	132.8000 MHz	48.68	18.7 dB		Peak List
l Pos. Peak	133.2800 MHz	50.15	20.2 dB		Section of the last
l Pos. Peak	133.6000 MHz	47.09	17.1 dB		Run Final
L Pos. Peak	134.0800 MHz	45.51	15.5 dB		Meas
l Pos. Peak	134.1600 MHz	45.24	15.2 dB		Name and the same
L Pos. Peak	135.4800 MHz	44.09	14.1 dB		Peak List
l Pos. Peak	138.0000 MHz	44.10	14.1 dB		Export
l Pos. Peak	138.1200 MHz	46.51	16.5 dB	ĵ	
l Pos. Peak	138.4000 MHz	46.16	16.2 dB		Decim Sep
L Pos. Peak	138.4800 MHz	45.15	15.2 dB	Ű	,
L Pos. Peak	140.0000 MHz	49.29	19.3 dB	•	

This saves valuable test time and is a great help for anyone who does not make such measurements on a regular basis.

Ordering information		
Description	Frequency range	Test receiver
Base unit	9 kHz to 3 GHz	R&S®ESL3 (1300.5001.03)
Tracking generator	9 kHz to 3 GHz	R&S®ESL3 (1300.5001.13)
Base unit	9 kHz to 6 GHz	R&S®ESL6 (1300.5001.06)
Tracking generator	9 kHz to 6 GHz	R&S®ESL6 (1300.5001.16)

Included: All models include power cable, quick start guide and CD-ROM (with operating manual and service manual) and three-year warranty

Popular accessories	
Description	Item
OCXO reference frequency	R&S®FSL-B4
Additional interfaces (video out, IF out, noise source control, AUX port, R&S*NRP-Zxx power sensor)	R&S®FSL-B5
Gated sweep	R&S®FSL-B8
AM/FM/ ϕ M measurement demodulator	R&S®FSL-K7
Power sensor support (requires R&S°FSL-B5 or R&S°NRP-Z3/-Z4)	R&S®FSL-K9

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