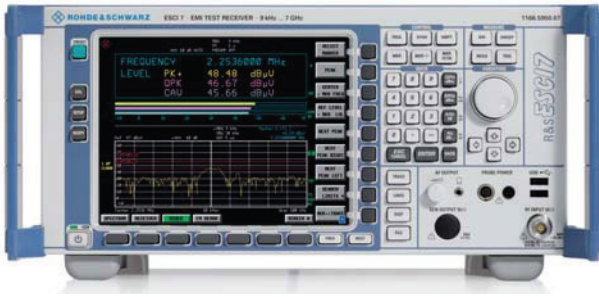


R&S® ESCI EMI Test Receiver



The R&S® ESCI/ESCI7 EMI test receivers are standard-compliant measuring receivers for EMC certification measurements in line with commercial standards in the frequency range from 9 kHz to 3/7 GHz. The receivers conform to the latest version of the CISPR 16-1-1 basic standard. At the same time, they function as full-featured and powerful spectrum analyzers for lab applications.

- Combination of standard-compliant EMI test receiver and high-quality spectrum analyzer
- Integrated preselection with selectable 20 dB preamplifier
- Frequency range from 9 kHz to 3/7 GHz; usable for all commercial EMC standards
- Effective analysis of the disturbance spectrum through simultaneous graphical presentation of the disturbance level and emission spectrum around the receive frequency ("mixed-mode")
- Time-domain analysis for evaluation of timing behavior of disturbances (e.g. click-rate analysis)
- Automatic consideration of coupling devices such as line impedance stabilization networks, probes, cables and antennas using transducer factors and sets
- SCAN settings in tabular format (max. 10 subranges)
- Simultaneous measurement of multiple traces for parallel evaluation
- Fast, reliable measurements using automatic and interactive test routines
- Continuous bargraph display and marker functions for precise measurements
- Automatic disturbance voltage measurements using remote-controllable line impedance stabilization networks (LISN) from Rohde & Schwarz
- Predefined transducer factors
- Library of limit lines for commercial standards

Specifications in brief

Frequency range	
R&S® ESCI	9 kHz to 3 GHz
R&S® ESCI7	9 kHz to 7 GHz
Scan	
Measurement time per frequency	max. 10 partial ranges with different settings
	50 ms to 100 s
Sweep (analyzer mode)	
In time range, span = 0 Hz	1 µs to 16 000 s, resolution 125 ns
In frequency range, span ≥ 10 Hz	2.5 ms to 16 000 s
Resolution bandwidth	
Sweep filter	
3-dB bandwidths	10 Hz to 3 MHz in 1/3 sequences
EMI filters (-6 dB, pulse bandwidth)	200 Hz, 9 kHz, 120 kHz, 1 MHz
Video bandwidths (analyzer mode)	1 Hz to 10 MHz in 1/3 sequences
FFT filters (-3 dB, analyzer mode)	1 Hz to 30 kHz in 1/3 sequences
Channel filters	
Preselection (switchable)	44 bandwidths, 100 Hz to 5 MHz
Preamplifier (switchable)	11 preselection filters
	20 dB
Max. input level	
RF attenuation ≥ 10 dB	
DC voltage	0 V (DC); 50 V (AC)
CW RF power	30 dBm
Max. pulse volt age (10 µs)	150 V
Max. pulse energy (20 µs)	10 mWs
Pulse spectral density	97 dBmV/MHz
Intermodulation	
1 dB compression of input mixer (f > 200 MHz, 0 dB RF attenuation, preselection OFF, preamplifier OFF)	5 dBm (nominal)
TOI, 200 MHz to 3 GHz, level 2 × -30 dBm, Δf > 5 × IF bandwidth or resolution bandwidth, or > 10 kHz)	
Preselection OFF	> 7 dBm, typ. 10 dBm
Preselection ON, preamplifier OFF	> 2 dBm, typ. 5 dBm
Preselection ON, preamplifier ON	> -18 dBm, typ. -15 dBm
Displayed noise floor (analyzer mode)	
0 dB RF attenuation, RBW = 10 Hz, VBW = 1 Hz, span = 0 Hz, 20 averages, trace average, 50 Ω termination, 10 MHz to 1 GHz	
Preselection OFF (AC/DC coupling)	< -142 dBm, typ. -145 dBm
Preselection OFF, preamplifier ON	< -142 dBm, typ. -145 dBm
Preselection ON, preamplifier ON	< -152 dBm, typ. -155 dBm
Displayed noise floor (receiver mode)	
AV display, 30 MHz to 1 GHz, BW = 120 kHz	
Preamplifier OFF	< 6 dBµV, typ. 3 dBµV
Preamplifier ON	< -16 dBµV, typ. -19 dBµV
Level measurement accuracy	
Total error	
Preselection off, preamplifier OFF	0.5 dB
Preselection on, preamplifier ON	1 dB
Quasi peak display	in line with CISPR 16-1

More information: www.rohde-schwarz.com, search term: esci