Version 02.01

December 2007

R&S®EZ-25 150 kHz Highpass

For conducted emission measurements in the presence of high longwave mains disturbance signals

- Conducted emission measurements in line with EN 50065 Part 1
- Pass frequency range from 150 kHz to 30 MHz
- Very steep slope in line with CISPR 16-1-1
- Suitable for any CISPR measuring receiver
- Relative attenuation >50 dB below 130 kHz
- Built-in 10 dB attenuator for exact 50 Ω termination of the LISN
- High pulse energy capability (50 mWs)
- Calibration data supplied

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When signals are transmitted on low-voltage networks in the frequency range below 150 kHz, very high voltage levels occur near the cutoff frequency of 148.5 kHz (see EN 50065 Part 1). In this case, the selectivity of the CISPR measuring receiver specified in CISPR 16-1-1 may cause problems since the equipment may not comply with the disturbance voltage limits at 150 kHz. CISPR 16-1-1 was therefore amended as follows: A highpass that can be connected in front of the CISPR measuring receiver to improve the selectivity and so achieve the values stipulated in EN 50065 Part 1 without impairing the passband of the measuring receiver was defined in the standard.

Problems with high disturbance voltages in the range below 150 kHz may also occur with EUTs that have nothing to do with signal transmission on a low-voltage network. Only a very few EMC product standards specify disturbance voltage limits below 150 kHz. Therefore, equipment manufacturers use noise suppression filters with very steep slopes to meet the requirements below 150 kHz. Measuring receivers may then be overloaded and thus cause measurement errors in the frequency range above 150 kHz. The R&S®EZ-25 highpass prevents this and allows precise measurements.

Specifications

Passband	150 kHz to 30 MHz
Insertion loss in passband	9.5 dB to 11 dB (calibration data supplied)
VSWR in passband (input)	<1.2
Stopband	below 130 kHz
Minimum attenuation in stopband	60 dB
Attenuation in transition area	
146 kHz	<12 dB
145 kHz	>12 dB
140 kHz	>24 dB
130 kHz	>60 dB
Maximum input voltage (continuous)	137 dBµV
Maximum pulse energy (50 µs)	50 mWs
Connectors	N female
Operating temperature range	0 °C to +40 °C
Dimensions (L × W × H)	145 mm × 95 mm × 52 mm (5.7 in × 3.74 in × 2.05 in) incl. female connectors: L = 185 mm (7.28 in)
Weight	500 g (1.1 lb)

Ordering information

Designation	Type	Order No.
150 kHz Highpass	R&S®EZ-25	1026.7796.03
Accessories supplied: Brief description with calibration data		

Certified Quality System ISO 9001 DQS REG. NO 1954 QM

Certified Environmental System ISO 14001 DQS REG. NO 1954 UM

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