

R&S® EVSD1000

VHF/UHF NAV/DRONE ANALYZER

Specifications



Specifications
Version 04.00

ROHDE & SCHWARZ

Make ideas real



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Definitions

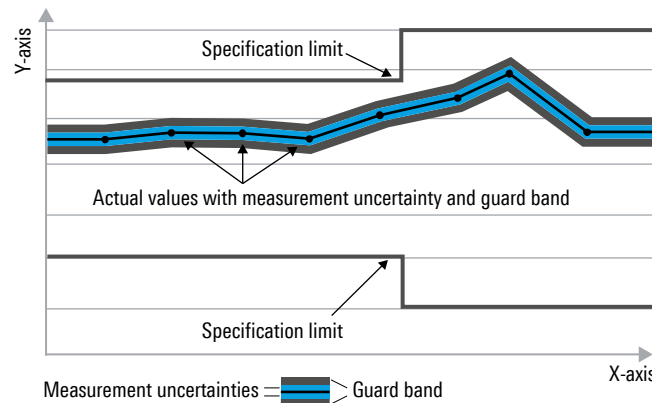
General

Product data applies under the following conditions:

- Three hours of storage at ambient temperature followed by 30 minutes of warm-up operation
- Specified environmental conditions met
- Recommended calibration interval adhered to
- All internal automatic adjustments performed, if applicable

Specifications with limits

Represent warranted product performance by means of a range of values for the specified parameter. These specifications are marked with limiting symbols such as $<$, $\leq$, $>$, $\geq$, $\pm$ or descriptions such as maximum, limit of, minimum. Compliance is ensured by testing or is derived from the design. Test limits are narrowed by guard bands to take into account measurement uncertainties, drift and aging, if applicable.



Non-traceable specifications with limits (n. trc.)

Represent product performance that is specified and tested as described under “Specifications with limits” above. However, product performance in this case cannot be warranted due to the lack of measuring equipment traceable to national metrology standards. In this case, measurements are referenced to standards used in the Rohde & Schwarz laboratories.

Specifications without limits

Represent warranted product performance for the specified parameter. These specifications are not specially marked and represent values with no or negligible deviations from the given value, e.g. dimensions or resolution of a setting parameter. Compliance is ensured by design.

Typical data (typ.)

Characterizes product performance by means of representative information for the given parameter. When marked with $<$, $>$ or as a range, it represents the performance met by approximately 80 % of the instruments at production time. Otherwise, it represents the mean value.

Nominal values (nom.)

Characterize product performance by means of a representative value for the given parameter, e.g. nominal impedance. In contrast to typical data, a statistical evaluation does not take place and the parameter is not tested during production.

Measured values (meas.)

Characterize expected product performance by means of measurement results gained from individual samples.

Uncertainties

Represent limits of measurement uncertainty for a given measurand. Uncertainty is defined with a coverage factor of 2 and has been calculated in line with the rules of the Guide to the Expression of Uncertainty in Measurement (GUM), taking into account environmental conditions, aging, wear and tear.

Device settings and GUI parameters are designated with the format “parameter: value”.

Non-traceable specifications with limits, typical data as well as nominal and measured values are not warranted by Rohde & Schwarz.

In line with the 3GPP standard, chip rates are specified in million chips per second (Mcps), whereas bit rates and symbol rates are specified in billion bit per second (Gbps), million bit per second (Mbps), thousand bit per second (kbps), million symbols per second (MSPS) or thousand symbols per second (kSPS), and sample rates are specified in million samples per second (Msamples/s). Gbps, Mcps, Mbps, MSPS, kbps, kSPS and Msamples/s are not SI units.

Specifications

Frequency

Frequency range		70 MHz to 410 MHz
Frequency resolution		10 Hz
Preselection filter ranges	marker beacon	74.7 MHz to 75.3 MHz
	ILS LLZ, VOR, GBAS	108 MHz to 118 MHz
	COM 1	118 MHz to 145 MHz
	ILS GS, COM 2	220 MHz to 410 MHz
Reference frequency, internal		
Accuracy		(time since last adjustment × aging rate) + temperature drift + calibration accuracy
Aging per year		1×10^{-7} (nom.)
Temperature drift	–10 °C to +50 °C	1×10^{-7} (nom.)
Achievable initial calibration accuracy		5×10^{-8} (nom.)
Spectral purity		
SSB phase noise	frequency = 110 MHz, carrier offset	
	10 kHz	–105 dBc (1 Hz) (typ.)
	25 kHz	–115 dBc (1 Hz) (typ.)
	100 kHz	–125 dBc (1 Hz) (typ.)
	1 MHz	–145 dBc (1 Hz) (typ.)

Level

Display ranges	low noise mode (15 dB RF gain, 15 dB IF gain)	noise floor up to –30 dBm
	normal mode (0 dB RF attenuation)	noise floor up to 0 dBm
	low distortion mode (15 dB RF attenuation)	noise floor up to +15 dBm
	autorange mode	noise floor up to +15 dBm
Maximum input level	DC voltage	50 V
	CW RF power	+30 dBm
	level resolution	0.01 dB
Residual spurious response	low noise mode	< –100 dBm
Intermodulation		
1 dB compression of input mixer (two-tone)	normal mode	+8 dBm (nom.)
Third order intercept point (TOI)	2×-10 dBm, $\Delta f > 200$ kHz, normal mode	> 20 dBm
	2×-10 dBm, $f_{in} = 108.1$ MHz, $f_{1/2} = 100.1$ MHz/104.1 MHz, normal mode	> 40 dBm (nom.)
Level measurement uncertainty		
Absolute level uncertainty at 113 MHz	IF bandwidth: 10 kHz, level: –10 dBm, normal RF mode	
	+20 °C to +30 °C	< 0.5 dB
	–10 °C to +50 °C	< 0.8 dB (nom.)
Frequency response from 70 MHz to 410 MHz, referenced to 113 MHz	normal RF mode	
	+20 °C to +30 °C	< 0.5 dB
	–10 °C to +50 °C	< 0.8 dB (nom.)
RF mode switching uncertainty	RF mode low noise or low distortion referenced to normal mode	< 0.3 dB
Bandwidth switching uncertainty	referenced to IFBW = 10 kHz	< 0.2 dB (nom.)
Nonlinearity of displayed level	SNR > 16 dB, 0 dB to –70 dB	< 0.2 dB
Total measurement uncertainty	70 MHz to 410 MHz, signal level: 0 dB to –80 dBm, SNR > 20 dB, RF mode auto, IF bandwidth: 10 kHz, 95 % confidence level, temperature range: +20 °C to +30 °C	
		1.0 dB
	dual frequency ILS or COM system	1.2 dB

ILS signal analysis

ILS measurement mode		
Without R&S®EVSG-K1 option	1F (single frequency system), WIDE	main (modulation parameters), distortion, ID, data recording
	2F (dual frequency system)	main (sum of CRS and CLR), ID, data recording
With R&S®EVSG-K1 option	2F (dual frequency system)	main (sum), course/clearance, ID, data recording
IF bandwidths	modulation analysis 1F, 2F	1/3/6/10 kHz (nom.), (3 kHz default)
	modulation analysis WIDE	1/3/6/10/18/25/36/50 kHz (nom.), (25 kHz default)
	ID analysis, distortion analysis	1/3/6/10 kHz (nom.), (3 kHz default)
ILS carrier offset search	1F, 2F	
	IF bandwidth range	1 kHz to 10 kHz
	search modes	manual, find carriers, autotune
Modulation depth uncertainty	RF mode auto, IF bandwidth: 1/3/6/10/18/32/50 kHz, input level: –75 dBm to +10 dBm, measurement time ≥ 10 ms, 95 % confidence level	
	0 % to 50 %, 90 Hz/150 Hz ± 2.5 %	≤ 0.3 %
	voice/identifier	≤ 1.0 % (nom.)
Modulation depth uncertainty	RF mode auto, IF bandwidth: 1/3/6 kHz, input level: –105 dBm to –75 dBm, measurement time ≥ 500 ms, 95 % confidence level	
	0 % to 50 %, 90 Hz/150 Hz ± 2.5 %	≤ 0.5 %
	voice/identifier	≤ 2.0 % (nom.)
AF measurement uncertainty	RF mode auto, IF bandwidth: 1/3/6/10/18/32/50 kHz, input level: –75 dBm to +10 dBm, measurement time ≥ 10 ms, 95 % confidence level	
Frequency	90 Hz/150 Hz ± 5 Hz	≤ 0.05 Hz (nom.)
	1020 Hz ± 50 Hz	≤ 1.0 Hz (nom.)
Phase angle 90 Hz/150 Hz		≤ 0.2° (nom.)
Phase angle 90 Hz/90 Hz, 150 Hz/150 Hz	with R&S®EVSG-K1 option	≤ 0.2° (nom.)
AF measurement uncertainty	RF mode auto, IF bandwidth: 1/3/6 kHz, input level: –105 dBm to –75 dBm, measurement time ≥ 500 ms, 95 % confidence level	
Frequency	90 Hz/150 Hz ± 5 Hz	≤ 0.1 Hz (nom.)
	1020 Hz ± 50 Hz	≤ 5.0 Hz (nom.)
Phase angle 90 Hz/150 Hz		≤ 1.0° (nom.)
Phase angle 90 Hz/90 Hz, 150 Hz/150 Hz	with R&S®EVSG-K1 option	≤ 1.0° (nom.)
DDM measurement uncertainty	RF mode auto, IF bandwidth: 1/3/6/10/18/32/50 kHz, input level: –75 dBm to +10 dBm, SDM: 10 % to 90 %, measurement time ≥ 10 ms, 95 % confidence level	
Localizer	≤ ±10 % DDM	≤ 0.04 % DDM ± 0.1 % of reading
	> ±10 % DDM	≤ 0.04 % DDM ± 0.2 % of reading
Glidepath	≤ ±20 % DDM	≤ 0.08 % DDM ± 0.1 % of reading
	> ±20 % DDM	≤ 0.08 % DDM ± 0.2 % of reading
DDM measurement uncertainty	RF mode auto, IF bandwidth: 1/3/6 kHz, input level: –105 dBm to –75 dBm, SDM: 10 % to 90 %, measurement time ≥ 500 ms, 95 % confidence level	
Localizer	≤ ±10 % DDM	≤ 0.25 % DDM ± 0.1 % of reading
	> ±10 % DDM	≤ 0.25 % DDM ± 0.2 % of reading
Glidepath	≤ ±20 % DDM	≤ 0.5 % DDM ± 0.1 % of reading
	> ±20 % DDM	≤ 0.5 % DDM ± 0.2 % of reading

VOR signal analysis (R&S®EVSG-K2 option)

VOR measurement mode		main, ID, distortion, data recording
IF bandwidths		1/3/6/10/18/25/36/50 kHz (nom.), (25 kHz default)
Modulation parameters	RF mode auto, IF bandwidth: 25/36/50 kHz, input level: –80 dBm to +10 dBm, measurement time ≥ 100 ms, 95 % confidence level	
Azimuth measurement uncertainty		≤ ±0.05°
AM modulation depth measurement uncertainty	0 % to 50 %, 30 Hz/9960 Hz ± 2 % voice/identifier	≤ 0.5 % ≤ 1.0 % (nom.)
AF frequency measurement uncertainty	30 Hz ± 3 Hz 1020 Hz ± 50 Hz 9960 Hz ± 100 Hz	≤ 0.03 Hz (nom.) ≤ 1.0 Hz (nom.) ≤ 0.5 Hz (nom.)
FM subcarrier measurement	RF mode auto, IF bandwidth: 25/36/50 kHz, input level: –80 dBm to +10 dBm, measurement time ≥ 100 ms, 95 % confidence level	
FM subcarrier deviation measurement uncertainty		≤ 0.1 Hz ± 0.5 % of reading (nom.)
Modulation parameters	RF mode auto, IF bandwidth: 25 kHz, input level: –100 dBm to –80 dBm, measurement time ≥ 500 ms, 95 % confidence level	
Azimuth measurement uncertainty		≤ ±0.25°
AM modulation depth measurement uncertainty	0 % to 50 %, 30 Hz/9960 Hz ± 2 % voice/identifier	≤ 1.0 % ≤ 2.0 % (nom.)
AF frequency measurement uncertainty	30 Hz ± 3 Hz 1020 Hz ± 50 Hz 9960 Hz ± 100 Hz	≤ 0.5 Hz (nom.) ≤ 5.0 Hz (nom.) ≤ 1.0 Hz (nom.)
FM subcarrier measurement	RF mode auto, IF bandwidth: 25 kHz, input level: –100 dBm to –80 dBm, measurement time ≥ 500 ms, 95 % confidence level	
FM subcarrier deviation measurement uncertainty		≤ 0.5 Hz ± 1 % of reading (nom.)

Marker beacon signal analysis (R&S®EVSG-K3 option)

Marker beacon measurement mode		main, ID, data recording
IF bandwidths		1/3/6/10/18/25/36/50 kHz (nom.) (10 kHz default)
Modulation parameters	RF mode auto, IF bandwidth: 1/3/6/10 kHz, input level: –80 dBm to +10 dBm, measurement time ≥ 100 ms, 95 % confidence level	
AM modulation depth measurement uncertainty	80 % to 100 %, 400/1300/3000 Hz ± 2 %	≤ 0.5 %
AF frequency measurement uncertainty	400/1300/3000 Hz ± 50 Hz	≤ 0.5 Hz (nom.)

GBAS mode (R&S®EVSG-K4 option)

Standards		ICAO Annex 10, RTCA DO-246
GBAS measurement modes		sequence, frame, burst, I/Q constellation, message content, data recording
IF bandwidths		16.8 Hz/25 kHz (nom.) (16.8 kHz default)
VDB capture range		±1 kHz (nom.)
Measurement and data decoding range	message failure rate < 1.0×10^{-3} RF mode low noise RF mode normal RF mode low distortion	–100 dBm to –35 dBm (nom.) –83 dBm to –5 dBm (nom.) –67 dBm to +10 dBm (nom.)
Modulation		D8PSK
Symbol rate		10 500 symbols/s (nom.)
Modulation parameters		
Burst level average		measured over the 48-bit synchronization and ambiguity resolution sequence
Slot peak level		maximum level within the slot from valid or invalid signals
Carrier frequency offset accuracy		see reference frequency in section Frequency
Error vector magnitude (EVM), RMS error	RMS normalization mode: mean constellation power	< 1 % (nom.)

TDMA timing parameters		
Resolution		2.38 μ s (nom.)
Range	start of the burst referred to the trigger signal	–400 μ s to 1.4 ms (nom.)
Synchronization sequence position		start of the synchronization and ambiguity resolution sequence
Message parameters		• training sequence FEC • application data • application FEC • slot occupancy • bit error rate (BER) before FEC • burst valid count • burst failed count
Message types supported by default	message types are described in XML and can be modified or extended	• message type 1 • message type 2 • message type 4 • message type 11
Trigger	required for measurement	pulse per second (PPS)
Required pulse width	trigger on rising edge	> 1 μ s
Required accuracy		$\pm$ 95.2 μ s

COM analysis (R&S®EVSG-K6 option)

COM measurement mode	1F (single frequency system)	main (modulation parameters), data recording
	2F (dual frequency system)	main (sum of TX1 and TX2), data recording
IF bandwidths		1/3/6/10 kHz (nom.), (3 kHz default)
Carrier offset	2F (8.33 kHz channel separation systems)	$\pm$ 2.5 kHz
Modulation parameters	RF mode auto, IF bandwidth 1/3/6/10 kHz, input level –100 dBm to +10 dBm, measurement time $\geq$ 500 ms, 95 % confidence level	
AM modulation depth measurement uncertainty	10 % to 95 %, 1 kHz $\pm$ 2.5 %	$\leq$ 0.5 %

RF and IF spectrum analysis (R&S®EVSG-K10 option)

RF frequency range		70 MHz to 410 MHz
Display range	selectable	noise floor up to 15 dBm
RF spectrum analysis mode		
Start/stop or center/span	user-selectable	70 MHz to 410 MHz
Resolution bandwidths		0.8/1.6/3.1/6.2/12.5/25/50/100 kHz
IF spectrum analysis mode		
Span (or start/stop)	user-selectable	1 kHz to 100 kHz
Resolution bandwidths	modes: auto/manual	2.3 Hz to 15 kHz

AF spectrum analysis (R&S®EVSG-K11 option)

RF frequency range		70 MHz to 410 MHz
Span (or start/stop)	user-selectable	10 Hz to 50 kHz
Resolution bandwidths	modes: auto/manual	2.3 Hz to 15 kHz

AF time domain analysis (R&S®EVSG-K12 option)

Input signal frequency range	RF input	70 MHz to 410 MHz
Input amplitude range	RF input, modulation depth	–100 % to +100 %
IF bandwidths		1/3/6/10/18/25/36/50 kHz (nom.), (6 kHz default)
Time range		0.1/0.2/0.5/1/2/5/10/20 ms (2 ms default)
Measurement result displays	ILS 1F, WIDE	AM time domain
	ILS 2F (with R&S®EVSG1-K1 option)	course frequency AM time domain
		clearance frequency AM time domain
	VOR (with R&S®EVSG1-K2 option)	main carrier AM time domain
		FM subcarrier time domain
		FM subcarrier AM time domain

Data recording

Data rate		up to 100 record sets/s
Number of record sets per data list		1 000 000
Number of data lists per mode	LLZ, GP, MB, VOR, COM	9999
Storage capacity (internal)		8 Gbyte
Export format		CSV
Parameter selection	ALL	R&S®EVSG native
	FULL	R&S®EVS300 compatible

I/Q data recording and streaming (R&S®EVSG1-K25 option)

Word length of I/Q samples		32 bit for I and 32 bit for Q
Sample rate		125 ksample/s
Signal analysis bandwidth		max. 100 kHz
Record data rate		8 Mbit/s
Data format		32 bit signed integer for I and Q, compatible to R&S®ARB toolbox plus for Rohde & Schwarz vector signal generators
Record time, nominal	internal memory	max. 4 h
	TCP/IP stream over Ethernet	unlimited

Inputs and outputs

Internal

USB interface		USB type A connector, USB 2.0, for data storage and software updates
Data link USB		USB type C cable connector, USB 2.0, data link interface
Data link antennas		RP-SMA female cable connector, 50 Ω , data link interface

External

RF input		SMA female connector, 50 Ω
LAN interface		M8-D connector, 10/100BASE-T
GNSS interface		M9 connector, USB 2.0, RS-232, PPS
External DC input		10 V to 28 V, max. 3 A

Optional module interfaces

Data link antennas		RP-SMA male connector, 50 Ω , data link interface
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General data

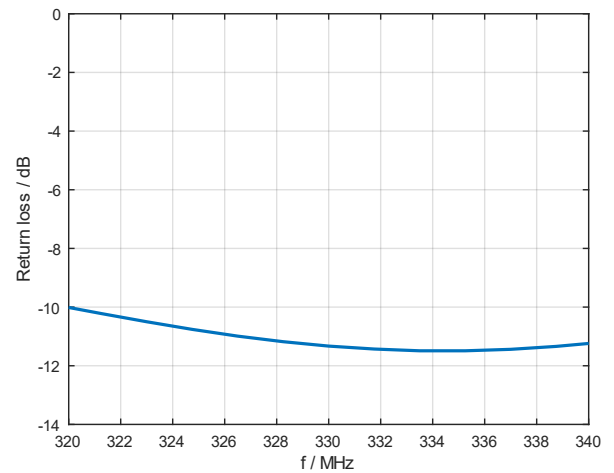
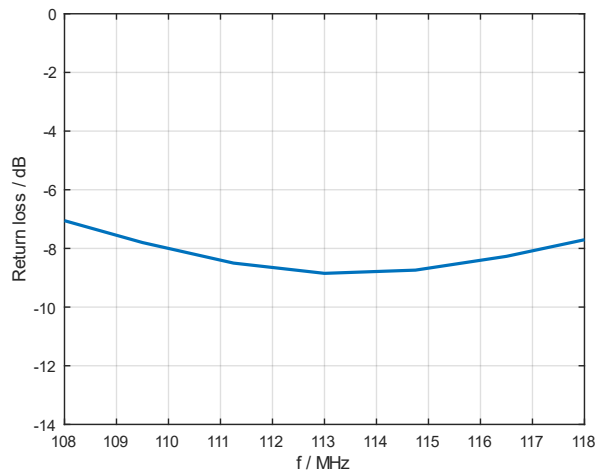
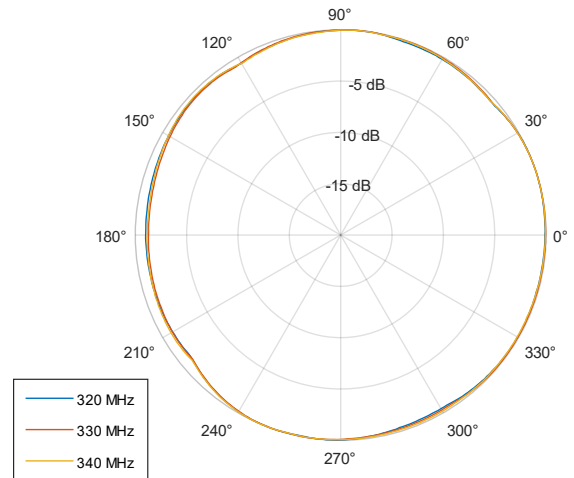
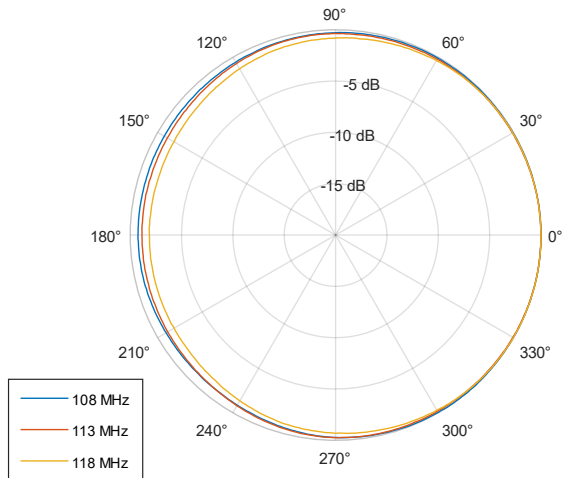
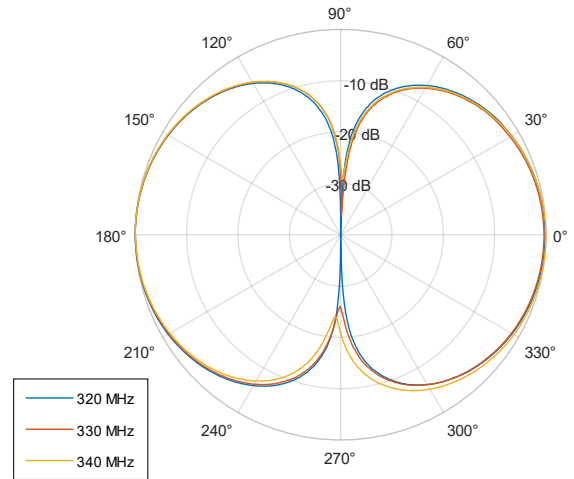
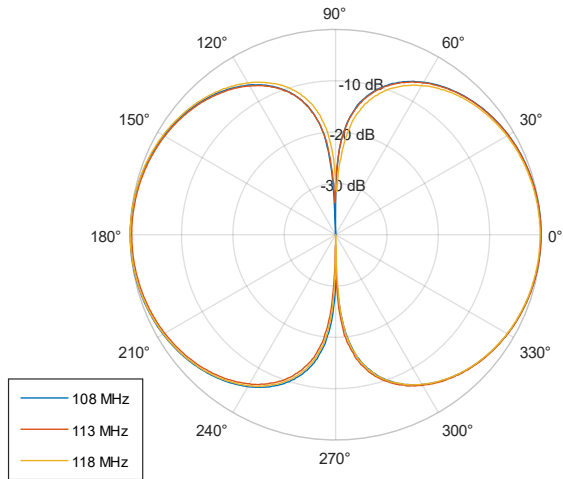
Status LEDs		• power/battery indication • RX indication • data link indication • GNSS indication
Temperature	without R&S®EVSD1-Z1 battery	
	operating temperature range	–10 °C to +50 °C
	permissible temperature range	–10 °C to +50 °C
	storage temperature range	–30 °C to +70 °C
	with R&S®EVSD1-Z1 battery	
	storage temperature range	–20 °C to +50 °C
Damp heat	without condensation	+55 °C at 85 % rel. humidity, in line with EN 60068-2-30
Protection class		IP43, in line with EN 60529
Power supply		
DC power supply		10 V to 28 V, max. 3 A
Internal battery	with R&S®EVSD1-Z1 battery	lithium-ion battery
Battery operation time	new, fully charged battery	2.5 h to 3 h
Product conformity		
Electromagnetic compatibility	in line with EMC Directive 2014/30/EU	applied harmonized standards: • EN 61326-1 ^{1, 2} • EN 55011 ¹
Electrical safety		in line with • IEC 61010-1 • EN 61010-1 • UL 61010-1
Test mark		CE, UKCA, KC
Maximum operating altitude	above sea level	4600 m (approx. 15100 ft)
Mechanical resistance		
Vibration	sinusoidal	5 Hz to 55 Hz, displacement: 0.30 mm, constant amplitude (1.8 g at 55 Hz); 55 Hz to 150 Hz, acceleration: 0.5 g constant, in line with EN 60068-2-6
	random	8 Hz to 500 Hz, acceleration: 1.2 g (RMS), in line with EN 60068-2-64
Shock		40 g shock spectrum, in line with MIL-STD-810G method no. 516.6, procedure I
Calibration interval	recommended for highest accuracy	12 months
	for general test and measurement applications	24 months
Dimensions (W × H × D)	R&S®EVSD1000	168 mm × 106 mm × 330 mm (6.61 in × 4.17 in × 12.99 in)
Weight	R&S®EVSD1000	1450 g (3.20 lb)
	R&S®EVSD1-Z1	170 g (0.37 lb)

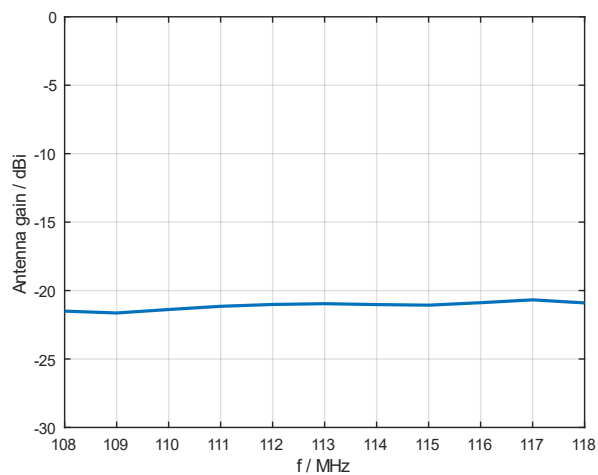
VHF/UHF antenna (R&S®EVSD1-Z3 option)

Frequency range		108 MHz to 118 MHz, 320 MHz to 340 MHz
Impedance		50 Ω (nom.)
Polarization		horizontal
Protection class		IPx4
Interface	cable length	80 mm (3.15 in)
	connector	SMA female
Dimensions (W × H × D)		40 mm × 400 mm × 251 mm (1.57 in × 15.75 in × 9.88 in)
Weight		150 g (0.33 lb)

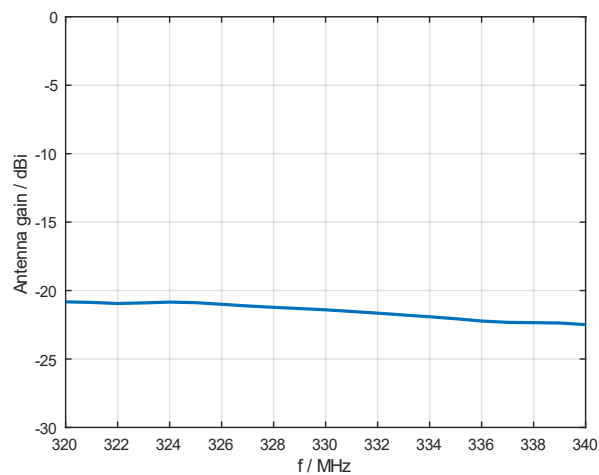
¹ Emission limits for class A equipment.

² Immunity test requirement for industrial environment (EN 61326, table 2).

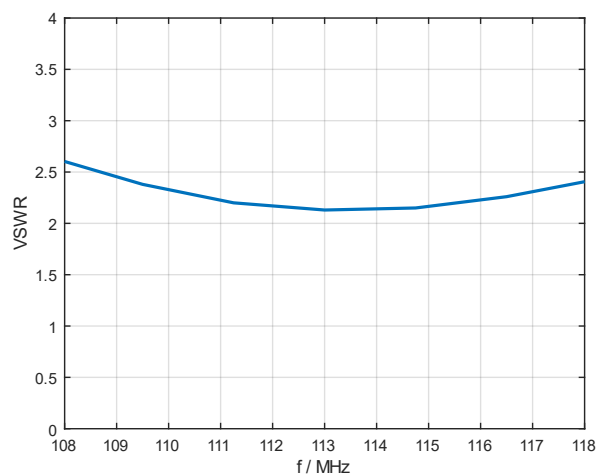




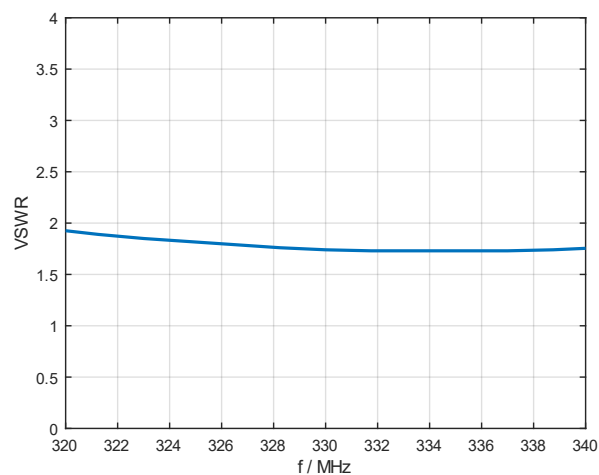
Antenna gain (nom.), frequency range
108 MHz to 118 MHz



Antenna gain (nom.), frequency range
320 MHz to 340 MHz



VSWR (nom.), frequency range
108 MHz to 118 MHz



VSWR (nom.), frequency range
320 MHz to 340 MHz

Data link module (Wi-Fi®) (R&S®EVSD1-Z5 option)

Operating mode		Wi-Fi® access point
Standards		IEEE 802.11a/b/g/n/ac
Frequency bands		2.4 GHz, 5 GHz
Operating range	with second data link module (Wi-Fi®) (R&S®EVSD1-Z5 option), line-of-sight, frequency band: 2.4 GHz, low data rate maximum	1000 m (nom.)
Weight		90 g (0.20 lb)

GNSS RTK device (rover/base) (R&S®EVSD1-Z6 option)

Receiver chip		u-blox AG ZED-F9P-04B
Frequency bands		• GPS/QZSS (L1C/A, L2C) • Galileo (E1-B/C, E5b) • GLONASS (L1OF, L2OF) • BeiDou (B1I, B2I)
Augmentation systems		• Quasi-Zenith Satellite System (QZSS) • Satellite based augmentation system (SBAS) • DGNSS according to RTCM 10403.3 / RTK (RTCM V3 messages) • Centimeter level augmentation service (CLAS)
Protection class		IPx4
Interfaces rover only	GNSS cable length	0.6 m (23.62 in)
	GNSS connector	M9 connector, USB 2.0, RS-232, PPS
Interfaces base only	USB cable length	1.0 m (39.37 in)
	USB connector	USB type A connector, USB 2.0
	PPS cable length	1.0 m (39.37 in)
	PPS connector	SMA male, TTL
Interface GNSS antenna		SMA female
Dimensions	W × H × D	105 mm × 20 mm × 52 mm (4.13 in × 0.79 in × 2.05 in)
Weight		120 g (0.26 lb)

GNSS antenna (R&S®EVSD1-Z7 option)

Frequency bands		• GPS/QZSS (L1, L2) • Galileo (E1, E5b) • GLONASS (G1, G2) • BeiDou (B1, B2b)
Protection class		IP67
Interface	cable length	3 m (118.11 in)
	connector	SMA male
Dimensions	W × H × D	53 mm × 50 mm × 17 mm (2.09 in × 1.97 in × 0.67 in)
Weight		98 g (0.22 lb)

Transport case (R&S®EVSD1-Z9 option)

Suitable products		• R&S®EVSD1000 • R&S®EVSD1-Z1 (4 pieces) • R&S®EVSD1-Z2 • R&S®EVSD1-Z3 • R&S®EVSD1-Z5 • R&S®EVSD1-Z6 (rover and base) • R&S®EVSD1-Z7 • R&S®EVSD1-Z20 • R&S®EVSG1-Z8 • Drone propellers (3 pairs) • Additional tools
Propeller dimensions	W × H × D, maximum	540 mm × 45 mm × 30 mm (21.26 in × 1.77 in × 1.18 in)
Dimensions	W × H × D	660 mm × 240 mm × 510 mm (25.98 in × 9.45 in × 20.08 in)
Weight	empty	11 kg (24.25 lb)

Drone adapter, DJI M300 RTK (R&S®EVSD1-Z20 option)

Part list		• Drone cable • Antenna extension cable for R&S®EVSD1-Z3 • Mechanical adapter for R&S®EVSD1000 • Mechanical adapter for R&S®EVSD1-Z3 • Quick release for R&S® EVSD1000 • Quick release for R&S® EVSD1-Z3
Interfaces drone cable	DC connector	M9 connector, DC
	GNSS connector	M9 connector, USB 2.0, RS-232, PPS
	DJI OSDK connector	USB-C connector, DC, USB 2.0, RS-232, PPS
Payload weight	maximum	2 kg (4.41 lb)
Weight		300 g (0.66 lb)

Ordering information

Designation	Type	Order No.
VHF/UHF nav/drone analyzer	R&S®EVSD1000	1330.0350.02
Accessories supplied: DC power cable (length: 0.5 m), LAN cable (length: 1 m), GNSS cable with open end (length: 2 m), getting started guide (English)		
Software options		
ILS CRS/CLR analysis	R&S®EVSG-K1	1329.9005.02
VOR analysis	R&S®EVSG-K2	1329.9011.02
Marker beacon analysis	R&S®EVSG-K3	1329.9028.02
GBAS mode	R&S®EVSG-K4	1329.9034.02
COM analysis	R&S®EVSG-K6	1329.9057.02
RF spectrum analysis	R&S®EVSG-K10	1329.9063.02
AF spectrum analysis	R&S®EVSG-K11	1329.9070.02
Time domain analysis	R&S®EVSG-K12	1329.9086.02
I/Q data streaming	R&S®EVSG1-K25	1329.9157.02
Recommended extras		
Documentation of calibration values	R&S®DCV-2	0240.2193.10
Battery pack	R&S®EVSD1-Z1	1330.0366.02
Battery charger	R&S®EVSD1-Z2	1330.0372.02
VHF/UHF antenna	R&S®EVSD1-Z3	1330.0395.02
Data link module (Wi-Fi®)	R&S®EVSD1-Z5	1330.0520.02
GNSS RTK device (rover)	R&S®EVSD1-Z6	1330.0472.02
GNSS RTK device (base)	R&S®EVSD1-Z6	1330.0472.03
GNSS antenna	R&S®EVSD1-Z7	1330.0437.02
Transport case	R&S®EVSD1-Z9	1330.0508.02
Drone adapter, DJI M300 RTK	R&S®EVSD1-Z20	1330.0443.02
External power supply, 100 V to 240 V	R&S®EVSG1-Z8	1330.0289.02
Verification test software	R&S®EVSG1-Z11	1329.8921.02

Service options		
Extended warranty, one year	R&S®WE1	Contact your local Rohde & Schwarz sales office for more information.
Extended warranty, two years	R&S®WE2	
Extended warranty, three years	R&S®WE3	
Extended warranty, four years	R&S®WE4	
Extended warranty with calibration coverage, one year	R&S®CW1	
Extended warranty with calibration coverage, two years	R&S®CW2	
Extended warranty with calibration coverage, three years	R&S®CW3	
Extended warranty with calibration coverage, four years	R&S®CW4	

Extended warranty with a term of one to four years (WE1 to WE4)

Repairs carried out during the contract term are free of charge ³. Necessary calibration and adjustments carried out during repairs are also covered.

Extended warranty with calibration (CW1 to CW4)

Enhance your extended warranty by adding calibration coverage at a package price. This package ensures that your Rohde & Schwarz product is regularly calibrated, inspected and maintained during the term of the contract. It includes all repairs ³ and calibration at the recommended intervals as well as any calibration carried out during repairs or option upgrades.

Wi-Fi® is a registered trademark of Wi-Fi Alliance®.

³ Excluding defects caused by incorrect operation or handling and force majeure. Wear-and-tear parts are not included.

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- ▶ Long-term dependability

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