

**ROHDE & SCHWARZ**

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# SIGNAL AND SPECTRUM ANALYZER PORTFOLIO

Product Flyer | Version 01.00



# SIGNAL AND SPECTRUM ANALYZERS



	R&S®FSW	R&S®FSA3000	R&S®FSV3000	R&S®FPS	R&S®FPL1000	R&S®FSL18	R&S®FSH	R&S®FPH	R&S®ZVH	R&S®ZPH	R&S®FPC	R&S®FSC
	High-performance analyzer with widest analysis bandwidth available on the market	Signal and spectrum analyzer with excellent performance and high speed for lab and production applications	Signal and spectrum analyzer optimized for high speed in 5G production systems	Fast and compact signal and spectrum analyzer with good performance in production and in monitoring systems	General purpose spectrum analyzer	General purpose spectrum analyzer with optional tracking generator up to 18 GHz	Handheld combination analyzer with spectrum analyzer up to 20 GHz and two-port vector network analyzer up to 8 GHz	Handheld spectrum analyzer up to 31 GHz	Handheld cable and antenna analyzer up to 8 GHz with optional vector network analyzer and spectrum analyzer	Handheld cable and antenna analyzer up to 4 GHz with optional spectrum analyzer	Bench spectrum analyzer with vector network analyzer and signal generator up to 3 GHz	Compact and cost-effective spectrum analyzer
Performance	•••••	•••••	••••	••••	•••	••	••	•	••	•	•	•
Frequency models	2 Hz to 8/13.6/26.5/43.5/50/67/85 GHz	10 Hz to 4/7.5/13.6/30/44 GHz	10 Hz to 4/7.5/13.6/30/44 GHz	10 Hz to 4/7/13.6/30/40 GHz	5 kHz to 3/7.5 GHz	9 kHz to 18 GHz	9 kHz to 20 GHz (3.6/8/13.6/20 GHz models available)	5 kHz to 31 GHz (2/3/4/6/8/13.6/20/26.5/31 GHz models available)	100 kHz to 8 GHz (3.6/8 GHz models available)	5 kHz to 4 GHz (3/4 GHz models available)	5 kHz to 3 GHz (1/2/3 GHz models available)	9 kHz to 6 GHz (3/6 GHz models available)
Analysis bandwidth	8.3 GHz	400 MHz	200 MHz	160 MHz	40 MHz	28 MHz	–	–	–	–	–	–
Phase noise	< –136 dBc (1 Hz) (f = 1 GHz, 10 kHz offset)	< –120 dBc (1 Hz) (f = 1 GHz, 10 kHz offset)	< –107 dBc (1 Hz) (f = 1 GHz, 10 kHz offset)	< –106 dBc (1 Hz) (f = 500 MHz, 10 kHz offset)	< –105 dBc (1 Hz) (f = 1 GHz, 10 kHz offset)	< –103 dBc (1 Hz) (f = 500 MHz, 10 kHz offset)	–105 dBc (1 Hz) (f = 500 MHz, 30 kHz offset)	–95 dBc (1 Hz) (f = 500 MHz, 30 kHz offset)	–105 dBc (1 Hz) (f = 500 MHz, 30 kHz offset)	–95 dBc (1 Hz) (f = 500 MHz, 30 kHz offset)	–92 dBc (1 Hz) (f = 500 MHz, 30 kHz offset)	–95 dBc (1 Hz) (f = 500 MHz, 30 kHz offset)
DANL, at 1 GHz, preamplifier OFF	< –150 dBm	< –150 dBm	< –148 dBm	< –150 dBm	< –149 dBm	< –140 dBm	–146 dBm	–146 dBm	–146 dBm	–146 dBm	–150 dBm	–146 dBm
DANL, at 1 GHz, preamplifier ON	< –166 dBm	< –164 dBm	< –162 dBm	< –160 dBm	< –163 dBm	–161 dBm	–165 dBm	–163 dBm	–165 dBm	–163 dBm	–165 dBm	–165 dBm
TOI	> 20 dBm	> 17 dBm	> 15 dBm	> 13 dBm	> 17 dBm	> 10 dBm	+15 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+15 dBm
Highlights	real time up to 800 MHz; signal analysis applications: noise, phase noise, cellular, wireless, analog demod, vector signal analyzer, pulse, transient, amplifier, DOCSIS, avionics, EMI, satellite	signal analysis applications: noise, phase noise, cellular, wireless, analog demod, vector signal analyzer, pulse, transients, amplifier	signal analysis applications: noise, phase noise, cellular, wireless, analog demod, vector signal analyzer, pulse, transients, amplifier	signal analysis applications: noise, phase noise, cellular, wireless, analog demod, vector signal analyzer, pulse, amplifier	battery, tracking generator; signal analysis applications: noise, analog demod, vector signal analyzer, NB-IoT (with R&S®VSE), EMI	battery, tracking generator; signal analysis applications: noise, analog demod	handheld combination analyzer: spectrum, full two-port vector network analyzer, power meter, cellular demodulation, interference hunting, EMI receiver mode, EMF measurement, vector voltmeter, pulse measurement	handheld spectrum analyzer: spectrum, power meter, interference hunting, EMI receiver mode, pulse measurement, field strength meter, modulation analyzer (AM/FM/ASK/FSK), up to 9 hours operating time	handheld combination analyzer: spectrum, cable and antenna, full two-port vector network analyzer, power meter, vector voltmeter	handheld combination analyzer: spectrum, cable and antenna, power meter, interference hunting, pulse analyzer, signal generator, modulation analyzer (AM/FM/ASK/FSK), built-in bias tee, extremely fast boot and measurement time	economy spectrum analyzer with value of three: spectrum analyzer, vector network analyzer, signal generator, EMI receiver mode, modulation analyzer (AM/FM/ASK/FSK)	compact spectrum analyzer with great RF performance, small form factor
Dimensions	462 mm x 240 mm x 504 mm (18.15 in x 9.44 in x 19.81 in)	462 mm x 197 mm x 417 mm (18.15 in x 7.76 in x 16.42 in)	462 mm x 197 mm x 417 mm (18.15 in x 7.76 in x 16.42 in)	461 mm x 107 mm x 551 mm (18.15 in x 4.21 in x 21.69 in)	408 mm x 186 mm x 235 mm (16.06 in x 7.32 in x 9.25 in)	408.8 mm x 158.1 mm x 465.3 mm (16.09 in x 6.22 in x 18.32 in)	194 mm x 300 mm x 144 mm (7.6 in x 11.8 in x 5.7 in)	202 mm x 294 mm x 76 mm (8.0 in x 11.6 in x 3 in)	194 mm x 300 mm x 144 mm (7.6 in x 11.8 in x 5.7 in)	202 mm x 294 mm x 76 mm (8.0 in x 11.6 in x 3 in)	396 mm x 178 mm x 147 mm (15.6 in x 7.0 in x 5.8 in)	233 mm x 158.1 mm x 350 mm (9.2 in x 6.2 in x 13.8 in)

Note: The specified data may require special models or options.

# HANDHELD SELECTION GUIDE



## Frequency selection guide

	R&S®ZPH	R&S®ZVH		R&S®FPH				R&S®FSH			
<b>Minimum frequency</b>											
CAT/VNA mode	2 MHz	100 kHz		–				300 kHz (model .24/.28), 100 kHz (model .23/.30)			
SA mode	5 kHz (model .12)	100 kHz		5 kHz				9 kHz			
<b>Maximum frequency</b>											
<b>Model</b>	<b>.02/.12</b>	<b>.24</b>	<b>.28</b>	<b>.02</b>	<b>.06</b>	<b>.13</b>	<b>.26</b>	<b>.04/.14/.24</b>	<b>.08/.18/.28</b>	<b>.13/.23</b>	<b>.20/.30</b>
2 GHz				●							
3 GHz	●			○							
3.6 GHz		●						●			
4 GHz	○			○							
6 GHz					●						
8 GHz			●		○				●	● (CAT/VNA)	● (CAT/VNA)
13.6 GHz						●				● (SA)	
20 GHz						○					● (SA)
26.5 GHz							●				
31 GHz							○				

- standard
- with optional upgrade

## Functionality selection guide

	R&S®ZPH, model .02	R&S®ZPH, model .12	R&S®ZVH	R&S®FPH	R&S®FSH
Cable and antenna measurement	●	●	●		● <sup>1)</sup>
Transmission/reflection VNA	● (S <sub>11</sub> only)	● (S <sub>11</sub> , S <sub>21</sub> )	●		● <sup>1)</sup>
Spectrum measurement		●	●	●	●
Digital (mobile) modulation					●
Interference hunting		●		●	●
Power measurement (built-in/with power sensor)	●	●	●	●	●
Pulse measurement	●	●	●	●	●

- functionality available

<sup>1)</sup> Model dependent.

## Rohde & Schwarz

The Rohde & Schwarz electronics group offers innovative solutions in the following business fields: test and measurement, broadcast and media, secure communications, cybersecurity, monitoring and network testing. Founded more than 80 years ago, the independent company which is headquartered in Munich, Germany, has an extensive sales and service network with locations in more than 70 countries.

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