

R&S®FSV

Signal and Spectrum Analyzer

Specifications



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Specifications

Specifications apply under the following conditions: 30 minutes warm-up time at ambient temperature, specified environmental conditions met, calibration cycle adhered to, and all internal automatic adjustments performed. Data without tolerances: typical values only. Data designated "nominal" applies to design parameters and is not tested.

Rohde & Schwarz equipment is designed for reliable operation up to an altitude of 3000 m above sea level, and for transport up to an altitude of 4500 m above sea level.

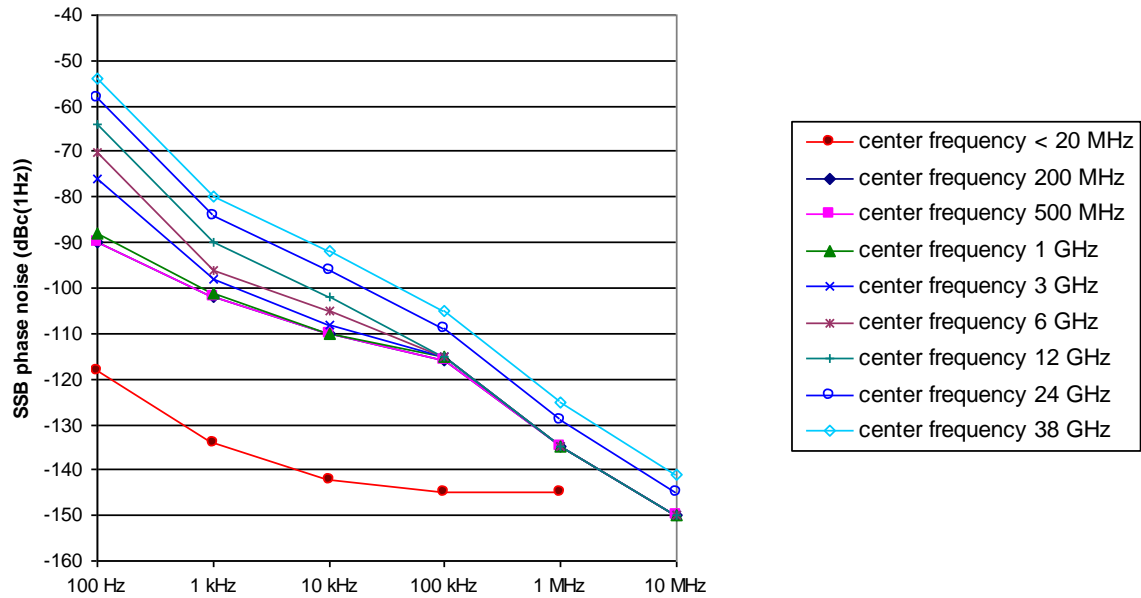
Frequency

| | | |
|-----------------------------|------------------|--------------------|
| Frequency range | R&S®FSV4 | |
| | DC coupled | 10 Hz to 4 GHz |
| | AC coupled | 1 MHz to 4 GHz |
| | R&S®FSV7 | |
| | DC coupled | 10 Hz to 7 GHz |
| | AC coupled | 1 MHz to 7 GHz |
| | R&S®FSV13 | |
| | DC coupled | 10 Hz to 13.6 GHz |
| | AC coupled | 10 MHz to 13.6 GHz |
| | R&S®FSV30 | |
| | DC coupled | 10 Hz to 30 GHz |
| | AC coupled | 10 MHz to 30 GHz |
| | R&S®FSV40 | |
| | DC coupled | 10 Hz to 40 GHz |
| AC coupled | 10 MHz to 40 GHz | |
| Frequency resolution | 0.01 Hz | |

| | | |
|---|---|---|
| Reference frequency, internal | | |
| Accuracy | | (time since last adjustment × aging rate) + temperature drift + calibration accuracy |
| Aging per year | standard | 1×10^{-6} |
| | with R&S®FSV-B4 OCXO reference frequency option | 1×10^{-7} |
| | with R&S®FSV-B14 ultra-high precision reference frequency option | 4×10^{-9} |
| Temperature drift (0 °C to +50 °C) | standard | 1×10^{-6} |
| | with R&S®FSV-B4 OCXO reference frequency option, model .02 | 1×10^{-7} |
| | with R&S®FSV-B4 OCXO extended frequency stability option, model .03 | 1×10^{-8} |
| | with R&S®FSV-B14 ultra-high precision reference frequency option | 5×10^{-10} |
| Achievable initial calibration accuracy | standard | 5×10^{-7} |
| | with R&S®FSV-B4 OCXO reference frequency option | 5×10^{-8} |
| | with R&S®FSV-B14 ultra-high precision reference frequency option | 1×10^{-10} |

| | | |
|-----------------------------------|---------------------------------|--|
| Frequency readout | | |
| Marker resolution | | 1 Hz |
| Uncertainty | | $\pm(\text{marker frequency} \times \text{reference uncertainty} + 10 \% \times \text{resolution bandwidth} + \frac{1}{2} (\text{span} / (\text{sweep points} - 1)) + 1 \text{ Hz})$ |
| Number of sweep (trace) points | default value | 691 |
| | range | 101 to 32001 |
| Marker tuning frequency step size | marker step size = sweep points | $\text{span} / (\text{sweep points} - 1)$ |
| | marker step size = standard | $\text{span} / (\text{default sweep points} - 1)$ |
| Frequency counter resolution | | 0.001 Hz |
| Count accuracy | | $\pm(\text{frequency} \times \text{reference uncertainty} + \frac{1}{2} (\text{last digit}))$ |
| Display range for frequency axis | | 0 Hz, 10 Hz to max. frequency |
| Resolution | | 0.1 Hz |
| Max. span deviation | | 0.1 % |

| Spectral purity | | |
|-----------------|---|------------------------|
| SSB phase noise | frequency = 500 MHz, carrier offset | |
| | 100 Hz | < -84 dBc (1 Hz) |
| | 1 kHz | < -101 dBc (1 Hz) |
| | 10 kHz | < -106 dBc (1 Hz) |
| | 100 kHz | < -115 dBc (1 Hz) |
| | 1 MHz | < -134 dBc (1 Hz) |
| | 10 MHz | -150 dBc (1 Hz) (typ.) |
| Residual FM | frequency = 500 MHz, RBW = 1 kHz, sweep time = 100 ms | < 3 Hz (nom.) |



Typical phase noise at different center frequencies.

Sweep time

| | | |
|---------------------|--------------------------|-----------------------------------|
| Range | span = 0 Hz | 1 μ s to 16000 s |
| | span \geq 10 Hz, swept | 1 ms to 16000 s ¹ |
| | span \geq 10 Hz, FFT | 7 μ s to 16000 s ² |
| Sweep time accuracy | span = 0 Hz | 0.1 % (nom.) |
| | span \geq 10 Hz, swept | 1 % (nom.) |

¹ Net sweep time without additional hardware settling time.

² Time for data acquisition for FFT calculation.

Resolution bandwidths

| Sweep filters and FFT filters | | |
|--|---|---|
| Resolution bandwidths (–3 dB) | span \geq 10 Hz, sweep filters | 1 Hz to 10 MHz in 1/2/3/5 sequence |
| | span \geq 10 Hz, FFT filters | 1 Hz to 3 MHz in 1/2/3/5 sequence |
| | span = 0 Hz, all models except R&S®FSV40, model .39 | 20 MHz, 28 MHz additionally |
| | with R&S®FSV-B70 option, span = 0 Hz, $f \leq$ 7 GHz | 40 MHz additionally |
| Bandwidth uncertainty | | < 3 % (nom.) |
| Shape factor 60 dB:3 dB | | < 5 (nom.) |
| Channel filters | | |
| Bandwidths (–3 dB) | standard (RRC = root raised cosine) | 100 Hz, 200 Hz, 300 Hz, 500 Hz |
| | | 1/1.5/2/2.4/2.7/3/3.4/4/4.5/5/6/8.5/9/10/ 12.5/14/15/16/18 (RRC)/20/21/ 24.3 (RRC)/25/30/50/100/150/192/200/ 300/500 kHz |
| | all models except R&S®FSV40, model .39 with R&S®FSV-B70 option, $f \leq$ 7 GHz | 1/1.228/1.28 (RRC)/1.5/2/3/ 3.84 (RRC)/4.096 (RRC)/5/10 MHz |
| | | 20 MHz, 28 MHz additionally 40 MHz additionally |
| Bandwidth uncertainty | | < 2 % (nom.) |
| Shape factor 60 dB:3 dB | | < 2 (nom.) |
| EMI filters (with R&S®FSV-K54 only) | | |
| Bandwidths (–6 dB) | | 10 Hz, 100 Hz, 200 Hz, 1 kHz, 9 kHz, 10 kHz, 100 kHz, 120 kHz, 1 MHz |
| Bandwidth uncertainty | | < 3 % (nom.) |
| Shape factor 60 dB:6 dB | | < 4 (nom.) |
| Video bandwidths | | |
| | standard | 1 Hz to 10 MHz in 1/2/3/5 sequence |
| | all models except R&S®FSV40, model .39 | 20 MHz, 28 MHz additionally |
| | with R&S®FSV-B70 option, $f \leq$ 7 GHz | 40 MHz additionally |
| Signal analysis bandwidth (equalized) | | |
| | $f \leq$ 7 GHz | |
| | all models except R&S®FSV40, model .39 | 28 MHz (nom.) |
| | with R&S®FSV-B70 option | 40 MHz (nom.) |
| | with R&S®FSV-B160 option | 160 MHz (nom.) |
| | R&S®FSV40, model .39 | 10 MHz (nom.) |

Level

| | | |
|-----------------------------------|---|-------------------------------------|
| Display range | | displayed noise floor up to +30 dBm |
| Max. input level | | |
| DC voltage | AC coupled | 50 V |
| | DC coupled | 0 V |
| CW RF power | RF attenuation 0 dB | |
| | RF preamplifier = off | 20 dBm (= 0.1 W) |
| | with R&S®FSV-B22 or R&S®FSV-B24 option, RF preamplifier = on | 13 dBm (= 0.02 W) |
| | RF attenuation ≥ 10 dB | |
| | RF preamplifier = off | 30 dBm (= 1 W) |
| | with R&S®FSV-B22 or R&S®FSV-B24 option, RF preamplifier = on | 23 dBm (= 0.2 W) |
| Pulse spectral density | RF attenuation 0 dB, RF preamplifier = off | 97 dB μ V/MHz |
| Max. pulse voltage | RF attenuation ≥ 10 dB | 150 V |
| Max. pulse energy | RF attenuation ≥ 10 dB, 10 μ s | 1 mWs |
| Intermodulation | | |
| 1 dB compression of input mixer | RF attenuation 0 dB, RF preamplifier = off | |
| | f ≤ 7 GHz | +3 dBm (nom.) |
| | f > 7 GHz | +5 dBm (nom.) |
| | with R&S®FSV-B22 or R&S®FSV-B24 option, RF preamplifier = on, RF attenuation 0 dB | |
| | f ≤ 7 GHz | -12 dBm (nom.) |
| | f > 7 GHz | -25 dBm (nom.) |
| Third-order intercept point (TOI) | RF attenuation 0 dB, level 2 × -15 dBm, $\Delta f > 5 \times$ RBW or 10 kHz, whichever is larger, RF preamplifier = off | |
| | 10 MHz ≤ f_{in} < 100 MHz | > 12 dBm, 15 dBm (typ.) |
| | 100 MHz ≤ f_{in} < 3.6 GHz | > 13 dBm, 16 dBm (typ.) |
| | 3.6 GHz ≤ f_{in} ≤ 40 GHz | > 15 dBm, 18 dBm (typ.) |
| | with R&S®FSV-B22 or R&S®FSV-B24 option, RF preamplifier = on, RF attenuation 0 dB, level 2 × -45 dBm, $\Delta f > 5 \times$ RBW or 10 kHz, whichever is larger | |
| | 10 MHz ≤ f_{in} < 100 MHz | -3 dBm (nom.) |
| | 100 MHz ≤ f_{in} < 3.6 GHz | -2 dBm (nom.) |
| | 3.6 GHz ≤ f_{in} < 7 GHz | 0 dBm (nom.) |
| 7 GHz ≤ f_{in} ≤ 40 GHz | -10 dBm (nom.) | |
| Second harmonic intercept (SHI) | RF attenuation 0 dB, level -10 dBm, RF preamplifier = off | |
| | 100 MHz < f_{in} ≤ 3.5 GHz | 45 dBm (typ.) |
| | 3.5 GHz < f_{in} ≤ 20 GHz | |
| | standard | 80 dBm (typ.) |
| | with R&S®FSV-B24 option | 75 dBm (typ.) |
| | with R&S®FSV-B22 or R&S®FSV-B24 option, RF preamplifier = on, RF attenuation 0 dB, level -40 dBm | |
| | 100 MHz < f_{in} ≤ 3.5 GHz | 25 dBm (nom.) |
| 3.5 GHz < f_{in} ≤ 20 GHz | 10 dBm (nom.) | |

Displayed average noise level without preamplifier options

0 dB RF attenuation, termination 50 Ω , log. scaling, normalized to 1 Hz RBW, RBW = 1 kHz, VBW = 3 kHz, zero span, sweep time 50 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed
R&S®FSV4, R&S®FSV7

| | |
|-----------------------------|-----------------------------|
| 9 kHz \leq f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz \leq f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz \leq f < 1 GHz | < -152 dBm, -155 dBm (typ.) |
| 1 GHz \leq f < 3.6 GHz | < -150 dBm, -153 dBm (typ.) |
| 3.6 GHz \leq f < 6 GHz | < -148 dBm, -151 dBm (typ.) |
| 6 GHz \leq f \leq 7 GHz | < -146 dBm, -149 dBm (typ.) |

R&S®FSV13, R&S®FSV30

| | |
|-------------------------------|-----------------------------|
| 9 kHz \leq f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz \leq f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz \leq f < 1 GHz | < -151 dBm, -154 dBm (typ.) |
| 1 GHz \leq f < 3.6 GHz | < -149 dBm, -152 dBm (typ.) |
| 3.6 GHz \leq f < 6 GHz | < -146 dBm, -149 dBm (typ.) |
| 6 GHz \leq f < 7.4 GHz | < -144 dBm, -147 dBm (typ.) |
| 7.4 GHz \leq f < 15 GHz | < -148 dBm, -151 dBm (typ.) |
| 15 GHz \leq f \leq 30 GHz | < -144 dBm, -147 dBm (typ.) |

R&S®FSV40

| | |
|-------------------------------|-----------------------------|
| 9 kHz \leq f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz \leq f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz \leq f < 1 GHz | < -151 dBm, -154 dBm (typ.) |
| 1 GHz \leq f < 3.6 GHz | < -149 dBm, -152 dBm (typ.) |
| 3.6 GHz \leq f < 6 GHz | < -146 dBm, -149 dBm (typ.) |
| 6 GHz \leq f < 7.4 GHz | < -144 dBm, -147 dBm (typ.) |
| 7.4 GHz \leq f < 15 GHz | < -145 dBm, -148 dBm (typ.) |
| 15 GHz \leq f < 34 GHz | < -142 dBm, -145 dBm (typ.) |
| 34 GHz \leq f \leq 40 GHz | < -136 dBm, -139 dBm (typ.) |

with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz

0 dB RF attenuation, termination 50 Ω , log. scaling, normalized to 1 Hz RBW, RBW = 5 Hz, VBW = 5 Hz, zero span, sweep time 500 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed

| | |
|--------|-----------------------------|
| 10 Hz | < -90 dBm (nom.) |
| 20 Hz | < -100 dBm, -110 dBm (typ.) |
| 100 Hz | < -110 dBm, -120 dBm (typ.) |
| 1 kHz | < -120 dBm, -130 dBm (typ.) |

with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz

| Displayed average noise level with R&S®FSV-B22 preamplifier option | |
|---|-----------------------------|
| 0 dB RF attenuation, termination 50 Ω, log. scaling, normalized to 1 Hz RBW, RBW = 1 kHz, VBW = 3 kHz, zero span, sweep time 50 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed, RF preamplifier = off | |
| R&S®FSV4, R&S®FSV7 | |
| 9 kHz ≤ f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz ≤ f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz ≤ f < 1 GHz | < -152 dBm, -155 dBm (typ.) |
| 1 GHz ≤ f < 3.6 GHz | < -150 dBm, -153 dBm (typ.) |
| 3.6 GHz ≤ f < 6 GHz | < -148 dBm, -151 dBm (typ.) |
| 6 GHz ≤ f ≤ 7 GHz | < -146 dBm, -149 dBm (typ.) |
| R&S®FSV13, R&S®FSV30 | |
| 9 kHz ≤ f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz ≤ f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz ≤ f < 1 GHz | < -151 dBm, -154 dBm (typ.) |
| 1 GHz ≤ f < 3.6 GHz | < -149 dBm, -152 dBm (typ.) |
| 3.6 GHz ≤ f < 6 GHz | < -146 dBm, -149 dBm (typ.) |
| 6 GHz ≤ f < 7.4 GHz | < -144 dBm, -147 dBm (typ.) |
| 7.4 GHz ≤ f < 15 GHz | < -148 dBm, -151 dBm (typ.) |
| 15 GHz ≤ f ≤ 30 GHz | < -144 dBm, -147 dBm (typ.) |
| R&S®FSV40 | |
| 9 kHz ≤ f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz ≤ f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz ≤ f < 1 GHz | < -151 dBm, -154 dBm (typ.) |
| 1 GHz ≤ f < 3.6 GHz | < -149 dBm, -152 dBm (typ.) |
| 3.6 GHz ≤ f < 6 GHz | < -146 dBm, -149 dBm (typ.) |
| 6 GHz ≤ f < 7.4 GHz | < -144 dBm, -147 dBm (typ.) |
| 7.4 GHz ≤ f < 15 GHz | < -145 dBm, -148 dBm (typ.) |
| 15 GHz ≤ f < 34 GHz | < -142 dBm, -145 dBm (typ.) |
| 34 GHz ≤ f ≤ 40 GHz | < -136 dBm, -139 dBm (typ.) |
| with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz | |
| 0 dB RF attenuation, termination 50 Ω, log. scaling, normalized to 1 Hz RBW, RBW = 1 kHz, VBW = 3 kHz, zero span, sweep time 50 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed, RF preamplifier = on | |
| R&S®FSV4, R&S®FSV7 | |
| 100 kHz ≤ f < 1 MHz | < -150 dBm, -155 dBm (typ.) |
| 1 MHz ≤ f < 1 GHz | < -162 dBm, -165 dBm (typ.) |
| 1 GHz ≤ f < 3.6 GHz | < -160 dBm, -163 dBm (typ.) |
| 3.6 GHz ≤ f < 6 GHz | < -158 dBm, -161 dBm (typ.) |
| 6 GHz ≤ f ≤ 7 GHz | < -156 dBm, -159 dBm (typ.) |
| R&S®FSV13, R&S®FSV30, R&S®FSV40 | |
| 100 kHz ≤ f < 1 MHz | < -145 dBm, -148 dBm (typ.) |
| 1 MHz ≤ f < 20 MHz | < -155 dBm, -158 dBm (typ.) |
| 20 MHz ≤ f < 1 GHz | < -161 dBm, -164 dBm (typ.) |
| 1 GHz ≤ f < 3.6 GHz | < -159 dBm, -162 dBm (typ.) |
| 3.6 GHz ≤ f < 6 GHz | < -156 dBm, -159 dBm (typ.) |
| 6 GHz ≤ f ≤ 7 GHz | < -154 dBm, -157 dBm (typ.) |
| with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz | |
| 0 dB RF attenuation, termination 50 Ω, log. scaling, normalized to 1 Hz RBW, RBW = 5 Hz, VBW = 5 Hz, zero span, sweep time 500 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed, RF preamplifier = off | |
| 10 Hz | < -90 dBm (nom.) |
| 20 Hz | < -100 dBm, -110 dBm (typ.) |
| 100 Hz | < -110 dBm, -120 dBm (typ.) |
| 1 kHz | < -120 dBm, -130 dBm (typ.) |
| with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz | |

Displayed average noise level with R&S®FSV-B24 preamplifier option

0 dB RF attenuation, termination 50 Ω , log. scaling, normalized to 1 Hz RBW, RBW = 1 kHz, VBW = 3 kHz, zero span, sweep time 50 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed, RF preamplifier = off

R&S®FSV13, R&S®FSV30

| | |
|-------------------------------|-----------------------------|
| 9 kHz \leq f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz \leq f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz \leq f < 1 GHz | < -150 dBm, -153 dBm (typ.) |
| 1 GHz \leq f < 3.6 GHz | < -147 dBm, -150 dBm (typ.) |
| 3.6 GHz \leq f < 6 GHz | < -144 dBm, -147 dBm (typ.) |
| 6 GHz \leq f < 7.4 GHz | < -141 dBm, -144 dBm (typ.) |
| 7.4 GHz \leq f < 13.6 GHz | < -145 dBm, -148 dBm (typ.) |
| 13.6 GHz \leq f < 15 GHz | < -143 dBm, -146 dBm (typ.) |
| 15 GHz \leq f \leq 30 GHz | < -141 dBm, -144 dBm (typ.) |

R&S®FSV40

| | |
|-------------------------------|-----------------------------|
| 9 kHz \leq f < 100 kHz | < -130 dBm, -140 dBm (typ.) |
| 100 kHz \leq f < 1 MHz | < -145 dBm, -150 dBm (typ.) |
| 1 MHz \leq f < 1 GHz | < -150 dBm, -153 dBm (typ.) |
| 1 GHz \leq f < 3.6 GHz | < -147 dBm, -150 dBm (typ.) |
| 3.6 GHz \leq f < 6 GHz | < -144 dBm, -147 dBm (typ.) |
| 6 GHz \leq f < 7.4 GHz | < -141 dBm, -144 dBm (typ.) |
| 7.4 GHz \leq f < 13.6 GHz | < -143 dBm, -146 dBm (typ.) |
| 13.6 GHz \leq f < 15 GHz | < -141 dBm, -144 dBm (typ.) |
| 15 GHz \leq f < 34 GHz | < -139 dBm, -142 dBm (typ.) |
| 34 GHz \leq f \leq 40 GHz | < -132 dBm, -135 dBm (typ.) |

with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz

0 dB RF attenuation, termination 50 Ω , log. scaling, normalized to 1 Hz RBW, RBW = 1 kHz, VBW = 3 kHz, zero span, sweep time 50 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed, RF preamplifier = on

R&S®FSV13, R&S®FSV30, R&S®FSV40

| | |
|-------------------------------|-----------------------------|
| 100 kHz \leq f < 1 MHz | < -145 dBm, -148 dBm (typ.) |
| 1 MHz \leq f < 20 MHz | < -155 dBm, -158 dBm (typ.) |
| 20 MHz \leq f < 1 GHz | < -160 dBm, -163 dBm (typ.) |
| 1 GHz \leq f < 3.6 GHz | < -157 dBm, -160 dBm (typ.) |
| 3.6 GHz \leq f < 6 GHz | < -153 dBm, -156 dBm (typ.) |
| 6 GHz \leq f < 7.4 GHz | < -150 dBm, -153 dBm (typ.) |
| 7.4 GHz \leq f < 15 GHz | < -164 dBm, -167 dBm (typ.) |
| 15 GHz \leq f < 34 GHz | < -159 dBm, -162 dBm (typ.) |
| 34 GHz \leq f \leq 40 GHz | < -154 dBm, -156 dBm (typ.) |

with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz

0 dB RF attenuation, termination 50 Ω , log. scaling, normalized to 1 Hz RBW, RBW = 5 Hz, VBW = 5 Hz, zero span, sweep time 500 ms, sample detector, trace average, sweep count = 20, mean marker, R&S®FSV-B160 option not installed, RF preamplifier = off

| | |
|--------|-----------------------------|
| 10 Hz | < -90 dBm (nom.) |
| 20 Hz | < -100 dBm, -110 dBm (typ.) |
| 100 Hz | < -110 dBm, -120 dBm (typ.) |
| 1 kHz | < -120 dBm, -130 dBm (typ.) |

with R&S®FSV-B160 option installed, add 1.5 dB to the above specifications for f > 7 GHz

| Spurious responses | | |
|---------------------------------------|---|------------------|
| Image response | 20 MHz ≤ f ≤ 7 GHz | |
| | $f_{in} - 2 \times 8409.9$ MHz (1st IF) | < -80 dBc (typ.) |
| | $f_{in} - 2 \times 729.9$ MHz (2nd IF) | < -80 dBc |
| | $f_{in} - 2 \times 89.9$ MHz (3rd IF) | < -80 dBc |
| | 7 GHz < f ≤ 30 GHz | |
| | $f_{in} \pm 2 \times 729.9$ MHz (1st IF) | < -80 dBc |
| | $f_{in} - 2 \times 89.9$ MHz (2nd IF) | < -80 dBc |
| | 30 GHz < f ≤ 40 GHz | |
| | $f_{in} \pm 2 \times 729.9$ MHz (1st IF) | < -70 dBc |
| $f_{in} - 2 \times 89.9$ MHz (2nd IF) | < -80 dBc | |
| Intermediate frequency response | 20 MHz ≤ f ≤ 7 GHz | |
| | 1st IF (8409.9 MHz) | < -70 dBc (typ.) |
| | 2nd IF (729.9 MHz) | < -80 dBc |
| | 3rd IF (89.9 MHz) | < -80 dBc |
| | 7 GHz < f ≤ 40 GHz | |
| | 1st IF (729.9 MHz) | < -80 dBc |
| 2nd IF (89.9 MHz) | < -80 dBc | |
| Residual spurious response | 0 dB RF attenuation | |
| | f ≤ 1 MHz | < -90 dBm |
| | f > 1 MHz | < -103 dBm |
| Local oscillator related spurious | f < 15 GHz | |
| | 1 kHz ≤ carrier offset ≤ 10 MHz | < -70 dBc |
| | carrier offset > 10 MHz | < -80 dBc |
| | 15 GHz ≤ f < 30 GHz | |
| | 1 kHz ≤ carrier offset ≤ 10 MHz | < -64 dBc |
| | carrier offset > 10 MHz | < -74 dBc |
| | 30 GHz ≤ f ≤ 40 GHz | |
| | 1 kHz ≤ carrier offset ≤ 10 MHz | < -58 dBc |
| carrier offset > 10 MHz | < -68 dBc | |
| Other interfering signals | | |
| Subharmonic of 1st LO | 20 MHz ≤ f < 7 GHz, spurious at 8410 MHz - 2 × f _{in} | < -70 dBc |
| Harmonic of 1st LO | mixer level < -25 dBm, spurious at f _{in} - 4205 MHz | < -70 dBc |

| Level display | | |
|----------------------------------|---------------------------|--|
| Logarithmic level axis | | 1 dB to 200 dB, in steps of 1/2/5 |
| Linear level axis | | 10 % of reference level per level division, 10 divisions or logarithmic scaling |
| Number of traces | | 6 |
| Trace detector | | max. peak, min. peak, auto peak (normal), sample, RMS, average |
| | with R&S®FSV-K54 | quasi-peak additionally |
| Trace functions | | clear/write, max. hold, min. hold, average, view |
| Setting range of reference level | | -130 dBm to (-10 dBm + RF attenuation - RF preamplifier gain), in steps of 0.01 dB |
| Units of level axis | logarithmic level display | dBm, dBμV, dBmV, dBμA, dBpW |
| | linear level display | μV, mV, μA, mA, pW, nW |

| Level measurement uncertainty | | |
|--|--|---------------------------------|
| Absolute level uncertainty at 64 MHz | RBW = 10 kHz, level -10 dBm, reference level -10 dBm, RF attenuation 10 dB | |
| | +20 °C to +30 °C | < 0.2 dB ($\sigma = 0.07$ dB) |
| | 0 °C to +50 °C | < 0.35 dB ($\sigma = 0.12$ dB) |
| Frequency response referenced to 64 MHz | DC coupling, RF attenuation 10 dB, 20 dB, 30 dB, 40 dB, RF preamplifier = off, +20 °C to +30 °C | |
| | 9 kHz \leq f < 10 MHz | < 0.5 dB ($\sigma = 0.17$ dB) |
| | 10 MHz \leq f < 3.6 GHz | < 0.3 dB ($\sigma = 0.1$ dB) |
| | 3.6 GHz \leq f < 7 GHz | < 0.5 dB ($\sigma = 0.17$ dB) |
| | 7 GHz \leq f < 13.6 GHz, span < 1 GHz | < 1.5 dB ($\sigma = 0.5$ dB) |
| | 13.6 GHz \leq f < 30 GHz, span < 1 GHz | < 2 dB ($\sigma = 0.66$ dB) |
| | 30 GHz \leq f \leq 40 GHz, span < 1 GHz | < 2.5 dB ($\sigma = 0.83$ dB) |
| | any setting of RF attenuation, RF preamplifier = off, 0 °C to +50 °C | |
| | 9 kHz \leq f < 3.6 GHz | < 1 dB ($\sigma = 0.33$ dB) |
| | 3.6 GHz \leq f < 7 GHz | < 1.5 dB ($\sigma = 0.5$ dB) |
| | 7 GHz \leq f < 13.6 GHz | < 2.5 dB ($\sigma = 0.83$ dB) |
| | 13.6 GHz \leq f < 30 GHz | < 3 dB ($\sigma = 1$ dB) |
| | 30 GHz \leq f \leq 40 GHz | < 3.5 dB ($\sigma = 1.33$ dB) |
| | any setting of RF attenuation, RF preamplifier = on, 0 °C to +50 °C | |
| | 9 kHz \leq f < 3.6 GHz | < 1 dB ($\sigma = 0.33$ dB) |
| | 3.6 GHz \leq f < 7 GHz | < 1.5 dB ($\sigma = 0.5$ dB) |
| | 7 GHz \leq f < 13.6 GHz | < 3 dB ($\sigma = 1$ dB) |
| 13.6 GHz \leq f < 30 GHz | < 3.5 dB ($\sigma = 1.17$ dB) | |
| 30 GHz \leq f \leq 40 GHz | < 4 dB ($\sigma = 1.33$ dB) | |
| DC coupling, RF preamplifier = off, 0 °C to +50 °C | | |
| 10 Hz \leq f < 20 Hz | < 1.5 dB (nom.) | |
| 20 Hz \leq f < 9 kHz | < 1 dB ($\sigma = 0.33$ dB) | |
| Attenuator switching uncertainty | f = 64 MHz, 0 dB to 70 dB, referenced to 10 dB attenuation | < 0.2 dB ($\sigma = 0.07$ dB) |
| Uncertainty of reference level setting | | 0 dB ³ |
| Bandwidth switching uncertainty | referenced to RBW = 10 kHz | |
| | sweep filters | < 0.1 dB ($\sigma = 0.04$ dB) |
| | FFT filters | < 0.2 dB ($\sigma = 0.07$ dB) |
| Display nonlinearity | | |
| Logarithmic level display | +5 °C to +40 °C, S/N > 16 dB | |
| | 0 dB to -70 dB | < 0.1 dB ($\sigma = 0.04$ dB) |
| | 0 °C to +50 °C, S/N > 16 dB | |
| | 0 dB to -50 dB | < 0.1 dB ($\sigma = 0.04$ dB) |
| | -50 dB to -60 dB | < 0.15 dB ($\sigma = 0.05$ dB) |
| | -60 dB to -70 dB | < 0.2 dB ($\sigma = 0.07$ dB) |
| Linear level display | S/N > 16 dB, 0 dB to -70 dB | 5 % of reference level |
| Total measurement uncertainty | | |
| signal level 0 dB to -70 dB below reference level, S/N > 20 dB, sweep time auto, sweep type = sweep, RF attenuation 10 dB, 20 dB, 30 dB, 40 dB, RF preamplifier = off, span/RBW < 100, 95 % confidence level, +20 °C to +30 °C | | |
| | 9 kHz \leq f < 10 MHz | 0.39 dB |
| | 10 MHz \leq f < 3.6 GHz | 0.28 dB |
| | 3.6 GHz \leq f < 7 GHz | 0.39 dB |
| | 7 GHz \leq f < 13.6 GHz | 1 dB |
| | 13.6 GHz \leq f < 30 GHz | 1.32 dB |
| | 30 GHz \leq f \leq 40 GHz | 1.65 dB |

³ The setting of the reference level affects only the graphical representation of the measurement result on the display, not the measurement itself. Therefore, the reference level setting causes no additional uncertainty in measurement results.

Measurement speed

| | | |
|---|--------------------|------------------------|
| Max. sweep rate, manual operation | | 1 ms (1000/s) (nom.) |
| Max. sweep rate, remote operation ^{4,5} | trace average = on | 0.9 ms (1100/s) (nom.) |
| Remote measurement and LAN transfer ⁴ | | 2.8 ms (357/s) (nom.) |
| Marker peak search ⁴ | | 1.3 ms (nom.) |
| Center frequency tune + sweep | f ≤ 7 GHz | 15 ms (nom.) |
| + sweep data transfer via remote control ⁴ | f > 7 GHz | 28 ms (nom.) |

Trigger functions

| | | |
|----------------------------------|------------------------------------|--|
| Trigger | | |
| Trigger source | | free run, video, external, IF power |
| Trigger source | signal analysis bandwidth > 40 MHz | free run, external |
| Trigger offset | span ≥ 10 Hz | 31.25 ns to 30 s, min. resolution 31.25 ns (or 1 % of offset) |
| | span = 0 Hz | (–sweep time) to 30 s, min. resolution 31.25 ns (or 1 % of offset) |
| Max. deviation of trigger offset | | ±(7.8125 ns + (0.1 % × trigger offset)) |
| IF power trigger | | |
| Sensitivity | min. signal power | –60 dBm + RF attenuation – RF preamplifier gain |
| | max. signal power | –10 dBm + RF attenuation – RF preamplifier gain |
| IF power trigger bandwidth | RBW > 500 kHz, swept | 40 MHz (nom.) |
| | RBW > 20 kHz, FFT | |
| | RBW ≤ 500 kHz, swept | 6 MHz (nom.) |
| | RBW ≤ 20 kHz, FFT | |
| Gated sweep | | |
| Gate source | | video, external, IF power |
| Gate delay | | 31.25 ns to 30 s, min. resolution 31.25 ns (or 1 % of delay) |
| Gate length | | 31.25 ns to 30 s, min. resolution 31.25 ns (or 1 % of gate length) |
| Max. deviation of gate length | | ±(7.8125 ns + (0.1 % × gate length)) |

⁴ Measured with personal computer equipped with Intel® Core™2 Duo 2.13 GHz and Gbit LAN interface.

⁵ Measurement is performed with a sweep count of 1000. The indicated speed is the average speed of 1 sweep.

I/Q data

| | | |
|---|--|--------------------------|
| Interface | | GPIB or LAN interface |
| Memory length | | max. 200 Msample I and Q |
| Word length of I/Q samples | sampling rate > 64 MHz or number of samples > 100 Msample | 18 bit |
| | otherwise | 24 bit |
| Sampling rate | all models except R&S®FSV40, model .39 | 100 Hz to 45 MHz |
| | with R&S®FSV-B70 option | 100 Hz to 128 MHz |
| | with R&S®FSV-B160 option | 100 Hz to 400 MHz |
| | R&S®FSV40, model .39 | 100 Hz to 12.5 MHz |
| Max. signal analysis bandwidth (equalized) | $f \leq 7$ GHz | |
| | all models except R&S®FSV40, model .39 | 28 MHz |
| | with R&S®FSV-B70 option | 40 MHz |
| | with R&S®FSV-B160 option | 160 MHz |
| | R&S®FSV40, model .39 | 10 MHz |

Signal analysis bandwidth ≤ 40 MHz ⁶

| | | |
|--|---|---|
| Amplitude flatness | $f \leq 7$ GHz | ± 0.3 dB (nom.) |
| Deviation from linear phase | $f \leq 7$ GHz | $\pm 1^\circ$ (nom.) |
| Nonlinearity of displayed level | | see section "Nonlinearity of displayed level" |
| Level measurement uncertainty (at center frequency) | | see section "Total measurement uncertainty" |
| Displayed average noise level (at center frequency) | | see section "Displayed average noise level" |
| ADC related third-order intermodulation distortion | $f \geq 100$ MHz two -30 dBm tones at input mixer within analysis bandwidth | -80 dBc (nom.) |
| Residual spurious response | RF attenuation 0 dB, $f \geq 100$ MHz | -90 dBm (nom.) |
| Other spurious responses | | see section "Spurious responses" |

Signal analysis bandwidth 40 MHz to 160 MHz ⁷

The specifications in this section apply for a maximum frequency of 7 GHz.

| | | |
|--|--|--|
| Amplitude flatness | RF attenuation ≥ 10 dB, RF preamplifier = off | |
| | $100 \text{ MHz} \leq f < 4 \text{ GHz}$ | ± 0.7 dB (nom.) ⁸ |
| | $4 \text{ GHz} \leq f < 6 \text{ GHz}$ | ± 1.0 dB (nom.) ⁸ |
| | $6 \text{ GHz} \leq f \leq 7 \text{ GHz}$ | ± 1.5 dB (nom.) ⁸ |
| Deviation from linear phase | RF attenuation ≥ 10 dB, RF preamplifier = off | |
| | $100 \text{ MHz} \leq f < 4 \text{ GHz}$ | $\pm 2^\circ$ (nom.) ⁹ |
| | $4 \text{ GHz} \leq f < 6 \text{ GHz}$ | $\pm 2.5^\circ$ (nom.) ⁹ |
| | $6 \text{ GHz} \leq f \leq 7 \text{ GHz}$ | $\pm 3^\circ$ (nom.) ⁹ |
| Nonlinearity of displayed level | 0 dB to -70 dB | < 0.15 dB (nom.) |
| Level measurement uncertainty (at center frequency) | | add 0.2 dB (nom.) to the values in section "Total measurement uncertainty" |
| Displayed average noise level (at center frequency) | | add 5 dB (nom.) to the values in section "Displayed average noise level" |
| ADC related third-order intermodulation distortion | $f \geq 100$ MHz two -30 dBm tones at input mixer within analysis bandwidth | -65 dBc (nom.) |
| Residual spurious response | RF attenuation 0 dB, $f \geq 100$ MHz | -90 dBm (nom.) |
| Image response | $f \geq 100$ MHz | -65 dBc (nom.) |
| ADC related spurious response | $f \geq 100$ MHz mixer level = -20 dBm reference level = signal level single tone within analysis bandwidth | -65 dBc (nom.) |
| Other spurious responses | | see section "Spurious responses" |

⁶ Requires R&S®FSV-B70 or R&S®FSV-B160 option.⁷ Requires R&S®FSV-B160 option.⁸ With R&S®FSV-B24 option installed, add 0.2 dB to the specifications.⁹ With R&S®FSV-B24 option installed, add 1° to the specifications.

Inputs and outputs

| RF input | | |
|--|---|--|
| Impedance | | 50 Ω |
| Connector | R&S®FSV4, R&S®FSV7, R&S®FSV13 | N female |
| | R&S®FSV30 | APC 3.5 mm/N female test port adapter |
| | R&S®FSV40 | 2.92 mm (K)/N female test port adapter |
| VSWR | RF attenuation ≥ 10 dB | |
| | 10 MHz $\leq f < 3.6$ GHz | < 1.5, 1.3 (typ.) |
| | 3.6 GHz $\leq f < 20$ GHz | < 2, 1.8 (typ.) |
| | 20 GHz $\leq f < 27$ GHz | < 2.2, 2 (typ.) |
| | 27 GHz $\leq f < 30$ GHz | |
| | DC coupled | < 2.2, 2 (typ.) |
| | AC coupled | 2.5 (typ.) |
| | 30 GHz $\leq f \leq 40$ GHz | |
| | DC coupled | < 2.5, 2.2 (typ.) |
| | AC coupled | 3 (typ.) |
| | RF attenuation < 10 dB, DC coupled | |
| | 10 MHz $\leq f < 7$ GHz | 2 (typ.) |
| 7 GHz $\leq f < 30$ GHz | 2.5 (typ.) | |
| 30 GHz $\leq f \leq 40$ GHz | 3 (typ.) | |
| Setting range of attenuator | standard | 0 dB to 75 dB, in 5 dB steps |
| | with R&S®FSV-B25 option | 0 dB to 75 dB, in 1 dB steps |
| Setting range of electronic attenuator | with R&S®FSV-B25 option, $f \leq 7$ GHz | 0 dB to 25 dB, in 1 dB steps |
| | with R&S®FSV-B25 option, $f > 7$ GHz | 0 dB to 9 dB, in 1 dB steps |
| RF preamplifier gain | with R&S®FSV-B22 option | 20 dB (nom.) |
| | with R&S®FSV-B24 option | |
| | $f \leq 7$ GHz | 20 dB (nom.) |
| | $f > 7$ GHz | 30 dB (nom.) |

| Probe power supply | | |
|---------------------------|--|---|
| Supply voltages | | +15 V DC, -12.6 V DC and ground, max. 150 mA (nom.) |

| Noise source drive | | |
|---------------------------|--|--|
| Connector | | BNC female |
| Output voltage | | 0 V/28 V, switchable, max. 100 mA (nom.) |

| Power sensor | | |
|---------------------|--|---|
| Connector | | 6-pin LEMOSA female for supported R&S®NRP-Zxx power sensors |

| USB interface | | |
|----------------------|--|-----------------------------------|
| | | 2 ports, type A plug, version 2.0 |

| Reference output | | |
|-------------------------|--------------------|--------------------------------|
| Connector | | BNC female |
| Impedance | | 50 Ω |
| Output frequency | internal reference | 10 MHz |
| | external reference | same as reference input signal |
| Level | | > 0 dBm (nom.) |

| Reference input | | |
|------------------------|--|---|
| Connector | | BNC female |
| Impedance | | 50 Ω |
| Input frequency range | | 1 MHz $\leq f_{in} \leq 20$ MHz, in 100 kHz steps |
| Required level | | > 0 dBm into 50 Ω |

| External trigger/gate input | | |
|------------------------------------|--|---|
| Connector | | BNC female |
| Trigger voltage | | 0.5 V to 3.5 V |
| Input impedance | | 10 k Ω |
| IEC/IEEE bus control | | |
| | | interface in line with IEC 625-2 (IEEE 488.2) |
| Command set | | SCPI 1997.0 |
| Connector | | 24-pin Amphenol female |
| Interface functions | | SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT1, C0 |
| LAN interface | | |
| | | 10/100/1000BASE-T |
| Connector | | RJ-45 |
| External monitor | | |
| Connector | | VGA-compatible, 15-pin, mini D-Sub |

General data

| | | |
|---|---|--|
| Display | | 21 cm LC TFT color display (8.4") |
| Resolution | | 800 x 600 pixel (SVGA resolution) |
| Pixel failure rate | | $< 1 \times 10^{-5}$ |
| Data storage | | |
| Internal | standard | hard disk ≥ 40 Gbyte (nom.) |
| | with R&S®FSV-B18 option | solid-state drive ≥ 8 Gbyte (nom.) |
| External | | supports USB-2.0-compatible memory devices |
| Environmental conditions | | |
| Temperature | operating temperature range | +5 °C to +40 °C |
| | operating temperature range with R&S®FSV-B18 option | 0 °C to +50 °C |
| | permissible temperature range | 0 °C to +50 °C |
| | storage temperature range | -40 °C to +70 °C |
| Climatic loading | | +40 °C at 90 % rel. humidity, in line with EN 60068-2-30 |
| Mechanical resistance | | |
| Vibration | sinusoidal | 5 Hz to 55 Hz 0.15 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 | 10 Hz to 300 Hz, acceleration 1.2 g (RMS), in line with EN 60068-2-64 |
| Shock | | 40 g shock spectrum, in line with MIL-STD-810E Method No. 516.4 Procedure I, MIL-PRF-28800F |
| EMC | | in line with EMC Directive 2004/108/EC including: IEC/EN 61326-1 ^{10, 11} , IEC/EN 61326-2-1, CISPR 11/EN 55011 ¹⁰ , IEC/EN 61000-3-2, IEC/EN 61000-3-3 |
| Recommended calibration interval | | 2 years ¹² |
| Power supply | | |
| AC supply | | 100 V to 240 V, 3 A to 1.25 A; 50 Hz to 400 Hz, class of protection I in line with VDE 411 |
| Power consumption | R&S®FSV4, R&S®FSV7 | 90 W (typ.), max. 180 W with all options |
| | R&S®FSV13, R&S®FSV30, R&S®FSV40 | 115 W (typ.), max. 180 W with all options |
| Safety | | in line with EN 61010-1, IEC 61010-1, UL 61010-1, CAN/CSA-C22.2 No. 61010-1 |
| Test mark | | VDE, GS, CSA, CSA-NRTL |
| Dimensions and weight | | |
| Dimensions (nom.) | W x H x D | 412 mm x 197 mm x 417 mm (16.22 in x 7.76 in x 16.42 in) |
| Net weight without options (nom.) | R&S®FSV4, R&S®FSV7 | 9.5 kg (20.94 lb) |
| | R&S®FSV13 | 10.3 kg (22.7 lb) |
| | R&S®FSV30 | 10.7 kg (23.58 lb) |
| | R&S®FSV40 | 11.1 kg (24.46 lb) |

¹⁰ Emission limits for class A equipment.

¹¹ Immunity test requirement for industrial environment (EN 61326 table 2).

¹² Two years apply for instruments with order number 1321.3008.xx and serial numbers starting from:

R&S®FSV4: 101570, R&S®FSV7: 101640, R&S®FSV13: 101590, R&S®FSV30: 103190, R&S®FSV40: 101060, R&S®FSV40 model .39: 101415.

To extend earlier instruments to a recommended calibration interval of 2 years please contact an Rohde & Schwarz service center.

Options

R&S®FSV-B3 audio demodulator

| Demodulation | | |
|-----------------------------------|--|----------------------------|
| AF demodulation types | | AM and FM |
| Audio output | | loudspeaker and phone jack |
| Marker stop time in spectrum mode | | 100 ms to 60 s |

| AF output | | |
|----------------------|--|-------------------------|
| Connector | | 3.5 mm mini jack |
| Output impedance | | 10 Ω |
| Open-circuit voltage | | up to 1.5 V, adjustable |

R&S®FSV-B5 additional interfaces

| User port | | |
|------------------|--|-------------------------------------|
| Connector | | 9-pin D-Sub male |
| Output | | TTL-compatible, 0 V/5 V, max. 15 mA |
| Input | | TTL-compatible, max. 5 V |

| IF/video/demod out | | |
|---------------------------|--|-------------------------|
| Connector | | BNC female, 50 Ω |

| IF out | | |
|-------------------------------------|--|----------------------|
| Bandwidth | | equal to RBW setting |
| IF frequency | | 32 MHz |
| Output level (gain versus RF input) | RF attenuation 0 dB, RF preamplifier = off, span = 0 Hz | 0 dB (nom.) |

| Video out | | |
|------------------|--|--------------------------|
| Bandwidth | | equal to VBW setting |
| Output scaling | log. display scale | logarithmic |
| | lin. display scale | linear |
| Output level | center frequency > 10 MHz, span = 0 Hz, signal at reference level and center frequency | 1 V (nom.), open circuit |

| Trigger out | | |
|--------------------|--|-------------------------|
| Connector | | BNC female |
| Output | | TTL-compatible, 0 V/5 V |

| | | |
|----------------------|--|-----------------------------------|
| USB interface | | 2 ports, type A plug, version 2.0 |
|----------------------|--|-----------------------------------|

R&S®FSV-B9 tracking generator

| Frequency | | |
|------------------|--|------------------|
| Frequency range | R&S®FSV4 | 100 kHz to 4 GHz |
| | R&S®FSV7, R&S®FSV13, R&S®FSV30, R&S®FSV40 | 100 kHz to 7 GHz |

| Frequency offset | | |
|-------------------------|--|--------|
| Setting range | | ±1 GHz |
| Setting resolution | | 1 Hz |

| Spectral purity | | |
|------------------------|---|-----------------------|
| SSB phase noise | frequency = 1000 MHz, carrier offset = 100 kHz | -90 dBc (1 Hz) (typ.) |

| Level | | |
|--------------------------------|---|-------------------------------------|
| Setting range | normal mode | -60 dBm to 0 dBm, in 0.1 dB steps |
| | with AM, I/Q | -60 dBm to -10 dBm, in 0.1 dB steps |
| Max. deviation of output level | frequency = 64 MHz, +20 °C to +30 °C, output level = -10 dBm, frequency offset = 0 Hz, modulation = off | < 1 dB |
| Frequency response | output level = -10 dBm, referenced to level at 64 MHz, 100 kHz ≤ f ≤ 7 GHz, frequency offset = 0 Hz, modulation = off | < 3 dB |

| Dynamic range | | |
|----------------------|-------------------------|--------|
| | RBW = 1 kHz, f > 10 MHz | 110 dB |

| Harmonics, non-harmonic spurious | | |
|---|------------------------|---------|
| | output level = -10 dBm | -30 dBc |

| Modulation | | |
|-------------------|----------------------------|----------------|
| Modulation format | external | I/Q, AM, FM |
| AM | f > 10 MHz | |
| | modulation depth | 0 % to 100 % |
| | modulation frequency range | 0 Hz to 1 MHz |
| FM | f > 10 MHz | |
| | modulation depth | 0 Hz to 10 MHz |
| | modulation frequency range | 0 Hz to 10 kHz |

| RF output | | |
|------------------|--|----------------|
| Connector | | N female, 50 Ω |
| VSWR | | 1.3 (nom.) |

| TG I/AM IN | | |
|-------------------|--|------------------|
| Connector | | BNC female, 50 Ω |
| Input voltage | | 1 V (pp) |

| TG Q/FM IN | | |
|-------------------|--|------------------|
| Connector | | BNC female, 50 Ω |
| Input voltage | | 1 V (pp) |

R&S®FSV-B10 external generator control

| Interface | | |
|------------------------------------|--|---|
| IEC/IEEE bus control | | 24-pin Amphenol female |
| Aux control | | 9-pin D-Sub female |
| Supported signal generators | | R&S®SGS100A, R&S®SGT100A, R&S®SMA100A, R&S®SMB100A, R&S®SMBV100A, R&S®SMC100A, R&S®SME, R&S®SMF100A, R&S®SMG, R&S®SMGL, R&S®SMGU, R&S®SMH, R&S®SMHU, R&S®SMIQ, R&S®SMJ100A, R&S®SML, R&S®SMP, R&S®SMR, R&S®SMT, R&S®SMU200A, R&S®SMV03, R&S®SMW200A, R&S®SMX, R&S®SMY |

R&S®FSV-B17 digital baseband interface

| I/Q data IN | | |
|----------------------|---|--------------------------------|
| Connector | | 26-pin female Mini D Ribbon |
| Data lines | number of data lines (differential lines) | 8 |
| | bit rate (on each data line) | 396 MHz to 600 MHz |
| | level | LVDS |
| Clock | clock rate | 66 MHz to 100 MHz |
| | level | LVDS |
| Communications lines | | bidirectional 2-wire interface |
| | level | 3.3 V |
| I/Q data OUT | | |
| Connector | | 26-pin female Mini D Ribbon |
| Data lines | number of data lines (differential lines) | 8 |
| | bit rate (on each data line) | 600 MHz |
| | level | LVDS |
| Clock | clock rate | 100 MHz |
| | level | LVDS |
| Communications lines | | bidirectional 2-wire interface |
| | level | 3.3 V |

R&S®FSV-B21 LO/IF ports for external mixers (for R&S®FSV30 and R&S®FSV40 only)

| LO signal | | |
|------------------|------------------|-----------------------|
| Frequency range | | 7.73 GHz to 15.23 GHz |
| Level | +20 °C to +30 °C | +15.5 dBm ± 1 dB |
| | +5 °C to +40 °C | +15.5 dBm ± 3 dB |

| IF input | | |
|-------------------|--|-----------|
| IF frequency | | 729.9 MHz |
| Full-scale level | 2-port mixer (LO output/IF input, front panel) | -20 dBm |
| | 3-port mixer (IF input, front panel) | -20 dBm |
| Level uncertainty | IF input level -30 dBm, RBW 30 kHz, 2-port mixer, LO output/IF input (front panel) | |
| | +20 °C to +30 °C | < 1 dB |
| | +5 °C to +40 °C | < 3 dB |
| | IF input level -30 dBm, RBW 30 kHz, 3-port mixer, IF input (front panel) | |
| | +20 °C to +30 °C | < 1 dB |
| | +5 °C to +40 °C | < 3 dB |

| Inputs and outputs | | |
|---------------------------|--|------------------|
| LO output/IF input | | SMA female, 50 Ω |
| IF input | | SMA female, 50 Ω |

R&S®FSV-B30 DC power supply for 12 V/24 V supply voltage

| | | |
|---------------------|--|--|
| Input voltage range | | 10 V to 28 V |
| Output voltage | | 120 V to 360 V DC |
| Input current | $V_{in} = 12\text{ V}$, instrument without options, preset settings | |
| | R&S®FSV4, R&S®FSV7 | 10 A (typ.) |
| | R&S®FSV13, R&S®FSV30, R&S®FSV40 | 13 A (typ.) |
| Temperature | operating temperature range | 0 °C to +50 °C |
| | storage temperature range | -40 °C to +70 °C |
| Dimensions | W x H x D | 201 mm x 125 mm x 56 mm (7.91 in x 4.92 in x 2.20 in) |
| Net weight | | 1 kg (2.2 lb) |

R&S®FSV-B32 Lithium-ion battery pack

| | | |
|---------------------|--|--|
| Battery pack | | |
| Output voltage | | 12 V (nom.) |
| Operating time | instrument without options, preset settings | 2 h (nom.) |
| Charge time | with R&S®FSV-B34 charger, T = +25 °C | 3.5 h (nom.) |
| Temperature | operating temperature range, discharge | 0 °C to +50 °C |
| | operating temperature range, charge | 0 °C to +45 °C |
| | storage temperature range | -20 °C to +60 °C ¹³ |
| Dimensions | W x H x D | 406 mm x 71 mm x 241 mm (16 in x 2.76 in x 9.49 in) |
| Net weight | | 3.4 kg (7.5 lb) |

R&S®FSV-B34 charger for R&S®FSV-B32 battery pack

| | | |
|------------------------|-----------|--|
| AC input voltage range | | 100 V to 240 V, ±10 % (nom.) |
| AC supply frequency | | 50 Hz to 60 Hz (nom.) |
| Power consumption | | max. 300 W (nom.) |
| Dimensions | W x H x D | 400 mm x 127 mm x 203 mm (15.75 in x 5 in x 8 in) |
| Net weight | | 3.1 kg (6.9 lb) |

¹³ The battery packs should be stored in an environment with low humidity, free from corrosive gas at a recommended temperature range < +21 °C. Extended exposure to temperatures above +45 °C could degrade battery performance and life.

Ordering information

| Designation | Type | Order No. |
|--|-------------------------|--------------|
| Signal and Spectrum Analyzer | R&S®FSV4 | 1321.3008.04 |
| Signal and Spectrum Analyzer | R&S®FSV7 | 1321.3008.07 |
| Signal and Spectrum Analyzer | R&S®FSV13 | 1321.3008.13 |
| Signal and Spectrum Analyzer | R&S®FSV30 | 1321.3008.30 |
| Signal and Spectrum Analyzer | R&S®FSV40 ¹⁴ | 1321.3008.39 |
| Signal and Spectrum Analyzer | R&S®FSV40 | 1321.3008.40 |
| Accessories supplied | | |
| Power cable and quick start guide | | |
| R&S®FSV30: test port adapter with 3.5 mm female (1021.0512.00) and N female (1021.0535.00) connectors | | |
| R&S®FSV40: test port adapter with 2.92 mm (K) female (1036.4790.00) and N female (1036.4777.00) connectors | | |

Options

| Designation | Type | Order No. | Retrofittable | Remarks |
|--|-------------|----------------------------|---------------|--|
| Ruggedized Housing | R&S®FSV-B1 | 1310.9500.02 | no | |
| Audio Demodulator | R&S®FSV-B3 | 1310.9516.02 | yes | retrofit in service center |
| OCXO Reference Frequency | R&S®FSV-B4 | 1310.9522.02 | yes | user-retrofittable |
| OCXO Extended Frequency Stability | R&S®FSV-B4 | 1310.9522.03 | yes | user-retrofittable |
| Additional Interfaces | R&S®FSV-B5 | 1310.9539.02 | yes | IF out, video out, AUX port, trigger out, 2 x USB |
| Tracking Generator (100 kHz to 7 GHz) | R&S®FSV-B9 | 1310.9545.02 | yes | retrofit in service center |
| External Generator Control | R&S®FSV-B10 | 1310.9551.02 | yes | retrofit in service center, excludes R&S®FSV-B160 |
| Ultra-High Precision Frequency Reference | R&S®FSV-B14 | 1310.9980.02 | yes | retrofit in service center, excludes R&S®FSV-B160 |
| Digital Baseband Interface | R&S®FSV-B17 | 1310.9568.02 | yes | user-retrofittable, for details ask service center, not available for R&S®FSV40, model .39 |
| Solid-State Drive (removable hard drive) | R&S®FSV-B18 | 1310.9697.10 ¹⁵ | yes | user-retrofittable |
| Spare Hard Drive (removable hard drive) | R&S®FSV-B19 | 1310.9574.10 ¹⁵ | yes | user-retrofittable |
| LO/IF Ports for External Mixers | R&S®FSV-B21 | 1310.9597.02 | no | |
| RF Preamp (9 kHz to 7 GHz) | R&S®FSV-B22 | 1310.9600.02 | yes | user-retrofittable |
| RF Preamp (9 kHz to 13.6 GHz) | R&S®FSV-B24 | 1310.9616.13 | no | |
| RF Preamp (9 kHz to 30 GHz) | R&S®FSV-B24 | 1310.9616.30 | no | |
| RF Preamp (9 kHz to 40 GHz) | R&S®FSV-B24 | 1310.9616.40 | no | |
| Electronic Attenuator, 1 dB steps | R&S®FSV-B25 | 1310.9622.02 | yes | user-retrofittable |
| DC power supply for 12 V/24 V supply voltage | R&S®FSV-B30 | 1329.0243.02 | yes | user-retrofittable |
| Lithium-Ion Battery Pack | R&S®FSV-B32 | 1321.3750.04 | yes | user-retrofittable, requires R&S®FSV-B1, R&S®FSV-B30 and R&S®FSV-B34 |
| USB Mass Memory Write Protection | R&S®FSV-B33 | 1309.5991.02 | no | pre-installation ex factory |
| Lithium-Ion Battery Charger | R&S®FSV-B34 | 1321.3950.02 | yes | user-retrofittable |

¹⁴ Max. bandwidth 10 MHz.

¹⁵ For instruments delivered with Windows 10 ex factory or instruments with upgrade R&S®FSV-U4 only. For other models and spare parts contact your local Rohde & Schwarz service center.

| Designation | Type | Order No. | Retrofittable | Remarks |
|---|----------------|--------------|---------------|---|
| 40 MHz Analysis Bandwidth | R&S®FSV-B70 | 1310.9645.02 | yes | user-retrofittable, for frequencies ≤ 7 GHz, not available for R&S®FSV40, model .39 |
| 160 MHz Analysis Bandwidth | R&S®FSV-B160 | 1311.2015.02 | yes | for R&S®FSV4 and R&S®FSV7, excludes R&S®FSV-B10 and R&S®FSV-B14 |
| 160 MHz Analysis Bandwidth | R&S®FSV-B160 | 1311.2015.13 | yes | for R&S®FSV13 for frequencies ≤ 7 GHz, excludes R&S®FSV-B10 and R&S®FSV-B14 |
| 160 MHz Analysis Bandwidth | R&S®FSV-B160 | 1311.2015.40 | yes | for R&S®FSV30 and R&S®FSV40 for frequencies ≤ 7 GHz, excludes R&S®FSV-B10 and R&S®FSV-B14. not available for R&S®FSV40, model .39 |
| Firmware/software | | | | |
| Analog Modulation Analysis for AM, FM, φM | R&S®FSV-K7 | 1310.8103.02 | | |
| FM Stereo Measurements | R&S®FSV-K7S | 1310.8126.02 | | requires R&S®FSV-K7 |
| Bluetooth®/EDR Measurements | R&S®FSV-K8 | 1310.8155.02 | | |
| Power Sensor Measurement with R&S®NRP Power Sensors | R&S®FSV-K9 | 1310.8203.02 | | supports R&S®NRP-Zxx power sensors |
| Analysis of GSM, EDGE and EDGE Evolution Signals | R&S®FSV-K10 | 1310.8055.02 | | |
| Spectrogram Measurements | R&S®FSV-K14 | 1310.8255.02 | | |
| Noise Figure and Gain Measurements | R&S®FSV-K30 | 1310.8355.02 | | |
| Phase Noise Measurement Application | R&S®FSV-K40 | 1310.8403.02 | | |
| EMI Measurement Application | R&S®FSV-K54 | 1310.0425.02 | | |
| CISPR Calibration for R&S®FSV-K54 (ISO 17025) | R&S®FSV-K54CAL | 1329.0237.02 | | requires R&S®FSV-K54 |
| Vector Signal Analysis | R&S®FSV-K70 | 1310.8455.02 | | |
| Analysis of 3GPP FDD Base Station Signals incl. HSPA+ | R&S®FSV-K72 | 1310.8503.02 | | |
| 3GPP FDD UE Analysis incl. HSPA+ | R&S®FSV-K73 | 1310.8555.02 | | |
| 3GPP TD-SCDMA BTS Measurements | R&S®FSV-K76 | 1310.8603.02 | | |
| TD-SCDMA UE Measurements | R&S®FSV-K77 | 1310.8655.02 | | |
| Analysis of CDMA2000® Base Station Signals | R&S®FSV-K82 | 1310.8703.02 | | |
| CDMA2000® MS Measurements | R&S®FSV-K83 | 1310.8755.02 | | |
| Analysis of 1xEV-DO Base Station Signals | R&S®FSV-K84 | 1310.8803.02 | | |
| 1xEV-DO MS Measurements | R&S®FSV-K85 | 1310.8778.02 | | |
| Analysis of WLAN 802.11a, b, g, j Signals | R&S®FSV-K91 | 1310.8903.02 | | not available for R&S®FSV40, model .39 |
| WLAN 802.11ac Measurement Application | R&S®FSV-K91AC | 1310.8926.02 | | requires R&S®FSV-B160, not available for R&S®FSV40, model .39 |
| Extension of R&S®FSV-K91 to 802.11n | R&S®FSV-K91n | 1310.9468.02 | | requires R&S®FSV-B70, not available for R&S®FSV40, model .39 |
| Analysis of WiMAX™ 802.16 SISO Signals | R&S®FSV-K93 | 1310.8955.02 | | not available for R&S®FSV40, model .39 |
| Analysis of EUTRA/LTE FDD Downlink Signals | R&S®FSV-K100 | 1310.9051.02 | | not available for R&S®FSV40, model .39 |
| Analysis of EUTRA/LTE FDD Uplink Signals | R&S®FSV-K101 | 1310.9100.02 | | not available for R&S®FSV40, model .39 |
| EUTRA/LTE Downlink MIMO Measurements | R&S®FSV-K102 | 1310.9151.02 | | requires R&S®FSV-K100 or R&S®FSV-K104, not available for R&S®FSV40, model .39 |
| Analysis of EUTRA/LTE TDD Downlink Signals | R&S®FSV-K104 | 1309.9774.02 | | not available for R&S®FSV40, model .39 |
| Analysis of EUTRA/LTE TDD Uplink Signals | R&S®FSV-K105 | 1309.9780.02 | | not available for R&S®FSV40, model .39 |

Upgrades ¹⁶

| Designation | Type | Order No. | Retrofittable | Remarks |
|---|------------|--------------|---------------|---|
| Windows 10 Upgrade for R&S®FSV with FMR11 CPU board | R&S®FSV-U4 | 1329.0437.10 | yes | retrofit in service center, for details contact your local Rohde & Schwarz service center |

¹⁶ The upgrade kit R&S®FSV-U4 is suitable for instruments starting from the following serial numbers:
R&S®FSV4: 103000, R&S®FSV7: 103000, R&S®FSV13: 103000, R&S®FSV30: 103396, R&S®FSV40: 101472, R&S®FSV40, model.39: 101119.
For instruments with lower serial numbers and R&S FSV 1307.9002.xx contact your local Rohde & Schwarz service center.

Recommended extras

| Designation | Type | Order No. |
|--|--------------|---------------------------------------|
| Headphones | | 0708.9010.00 |
| IEC/IEEE Bus Cable, length: 1 m | R&S®PCK | 0292.2013.10 |
| IEC/IEEE Bus Cable, length: 2 m | R&S®PCK | 0292.2013.20 |
| 19" Rack Adapter (not for R&S®FSV-B1) | R&S®ZZA-478 | 1096.3248.00 |
| 19" Rack Adapter, pre-installed ex factory (not for R&S®FSV-B1) | R&S®FSV-B478 | 1310.9951.02 |
| Soft Carrying Case (gray) | R&S®ZT-473 | 1109.5048.00 |
| Matching pads, 50/75 Ω | | |
| L Section, matching at both ends | R&S®RAM | 0358.5414.02 |
| Series Resistor, 25 Ω, matching at one end (taken into account in instrument function RF INPUT 75 Ω) | R&S®RAZ | 0358.5714.02 |
| SWR bridges, 50 Ω | | |
| SWR Bridge, 5 MHz to 3 GHz | R&S®ZRB2 | 0373.9017.5x |
| SWR Bridge, 40 kHz to 4 GHz | R&S®ZRC | 1039.9492.5x |
| High-power attenuators | | |
| Attenuator 100 W, 3/6/10/20/30 dB, 1 GHz | R&S®RBU100 | 1073.8495.xx (xx = 03/06/10/20/30) |
| Attenuator 50 W, 3/6/10/20/30 dB, 2 GHz | R&S®RBU50 | 1073.8695.xx (xx = 03/06/10/20/30) |
| Attenuator 50 W, 20 dB, 6 GHz | R&S®RDL50 | 1035.1700.52 |
| Connectors and cables | | |
| N-type Adapter for R&S®RT-Zxx probes | R&S®RT-ZA9 | 1417.0909.02 |
| Probe Power Connector, 3-pin | | 1065.9480.00 |
| LVDS Cable for connecting digital baseband interfaces | R&S®SMU-Z6 | 1415.0201.02 |
| DC blocks | | |
| DC Block, 10 kHz to 18 GHz (type N) | R&S®FSE-Z4 | 1084.7443.02 |
| External harmonic mixers (for R&S®FSV30/FSV40 with R&S®FSV-B21 option) | | |
| Harmonic Mixer 40 GHz to 60 GHz | R&S®FS-Z60 | 1089.0799.02 |
| Harmonic Mixer 50 GHz to 75 GHz | R&S®FS-Z75 | 1089.0847.02 |
| Harmonic Mixer 60 GHz to 90 GHz | R&S®FS-Z90 | 1089.0899.02 |
| Harmonic Mixer 75 GHz to 110 GHz | R&S®FS-Z110 | 1089.0947.04 |
| For R&S®FSV30 only | | |
| Test Port Adapter, N male | | 1021.0541.00 |
| Test Port Adapter, 3.5 mm male | | 1021.0529.00 |
| Microwave Measurement Cable with test port adapter set (N male and 3.5 mm male) | R&S®FSE-Z15 | 1046.2002.02 |
| For R&S®FSV40 only | | |
| Test Port Adapter, N male | | 1036.4783.00 |
| Test Port Adapter, K male | | 1036.4802.00 |
| Test Port Adapter, 2.4 mm female | R&S®FSE-Z5 | 1088.1627.02 |

Power sensors supported by the R&S®FSV-K9 option ¹⁷

| Designation | Type | Order No. |
|---|---------------------------|--------------|
| Universal power sensors | | |
| 10 MHz to 8 GHz, 100 mW, 2-path | R&S®NRP-Z211 | 1417.0409.02 |
| 10 MHz to 8 GHz, 200 mW | R&S®NRP-Z11 ¹⁸ | 1138.3004.02 |
| 10 MHz to 18 GHz, 100 mW, 2-path | R&S®NRP-Z221 | 1417.0309.02 |
| 10 MHz to 18 GHz, 200 mW | R&S®NRP-Z21 ¹⁸ | 1137.6000.02 |
| 10 MHz to 18 GHz, 2 W | R&S®NRP-Z22 ¹⁸ | 1137.7506.02 |
| 10 MHz to 18 GHz, 15 W | R&S®NRP-Z23 ¹⁸ | 1137.8002.02 |
| 10 MHz to 18 GHz, 30 W | R&S®NRP-Z24 ¹⁸ | 1137.8502.02 |
| Power sensor modules with power splitter | | |
| DC to 18 GHz, 500 mW | R&S®NRP-Z27 | 1169.4102.02 |
| DC to 26.5 GHz, 500 mW | R&S®NRP-Z37 | 1169.3206.02 |
| Thermal power sensors | | |
| 0 Hz to 18 GHz, 100 mW | R&S®NRP18T | 1424.6115.02 |
| 0 Hz to 18 GHz, 100 mW | R&S®NRP18TN | 1424.6121.02 |
| 0 Hz to 33 GHz, 100 mW | R&S®NRP33T | 1424.6138.02 |
| 0 Hz to 33 GHz, 100 mW | R&S®NRP33TN | 1424.6144.02 |
| 0 Hz to 40 GHz, 100 mW | R&S®NRP40T | 1424.6150.02 |
| 0 Hz to 40 GHz, 100 mW | R&S®NRP40TN | 1424.6167.02 |
| 0 Hz to 50 GHz, 100 mW | R&S®NRP50T | 1424.6173.02 |
| 0 Hz to 50 GHz, 100 mW | R&S®NRP50TN | 1424.6180.02 |
| 0 Hz to 67 GHz, 100 mW | R&S®NRP67T | 1424.6196.02 |
| 0 Hz to 67 GHz, 100 mW | R&S®NRP67TN | 1424.6209.02 |
| 0 Hz to 110 GHz, 100 mW | R&S®NRP110T | 1424.6215.02 |
| Average power sensors | | |
| 8 kHz to 6 GHz, 200 mW | R&S®NRP6A | 1424.6796.02 |
| 8 kHz to 6 GHz, 200 mW | R&S®NRP6AN | 1424.6809.02 |
| 9 kHz to 6 GHz, 200 mW | R&S®NRP-Z91 ¹⁸ | 1168.8004.02 |
| 8 kHz to 18 GHz, 200 mW | R&S®NRP18A | 1424.6815.02 |
| 8 kHz to 18 GHz, 200 mW | R&S®NRP18AN | 1424.6821.02 |
| Three path diode power sensors | | |
| 100 pW to 200 mW, 10 MHz to 8 GHz | R&S®NRP8S | 1419.0006.02 |
| 100 pW to 200 mW, 10 MHz to 8 GHz, LAN version | R&S®NRP8SN | 1419.0012.02 |
| 100 pW to 200 mW, 10 MHz to 18 GHz | R&S®NRP18S | 1419.0029.02 |
| 100 pW to 200 mW, 10 MHz to 18 GHz, LAN version | R&S®NRP18SN | 1419.0035.02 |
| 1 nW to 2 W, 10 MHz to 18 GHz | R&S®NRP18S-10 | 1424.6721.02 |
| 10 nW to 15 W, 10 MHz to 18 GHz | R&S®NRP18S-20 | 1424.6738.02 |
| 30 nW to 30 W, 10 MHz to 18 GHz | R&S®NRP18S-25 | 1424.6744.02 |
| 100 pW to 200 mW, 10 MHz to 33 GHz | R&S®NRP33S | 1419.0064.02 |
| 100 pW to 200 mW, 10 MHz to 33 GHz, LAN version | R&S®NRP33SN | 1419.0070.02 |
| 100 pW to 200 mW, 10 MHz to 33 GHz, LAN version, TVAC-compliant | R&S®NRP33SN-V | 1419.0129.02 |
| 100 pW to 100 mW, 50 MHz to 40 GHz | R&S®NRP40S | 1419.0041.02 |
| 100 pW to 100 mW, 50 MHz to 40 GHz, LAN version | R&S®NRP40SN | 1419.0058.02 |
| 100 pW to 100 mW, 50 MHz to 50 GHz | R&S®NRP50S | 1419.0087.02 |
| 100 pW to 100 mW, 50 MHz to 50 GHz, LAN version | R&S®NRP50SN | 1419.0093.02 |
| Wideband power sensors | | |
| 50 MHz to 18 GHz, 100 mW | R&S®NRP-Z81 | 1137.9009.02 |
| 50 MHz to 40 GHz, 100 mW (2.92 mm) | R&S®NRP-Z85 | 1411.7501.02 |
| 50 MHz to 40 GHz, 100 mW (2.40 mm) | R&S®NRP-Z86 | 1417.0109.40 |
| 50 MHz to 44 GHz, 100 mW (2.40 mm) | R&S®NRP-Z86 | 1417.0109.44 |

¹⁷ For average power measurement only.¹⁸ Product discontinued.

| Service options | | |
|--|---------|---|
| Extended Warranty, one year | R&S®WE1 | Please contact your local Rohde & Schwarz sales office. |
| Extended Warranty, two years | R&S®WE2 | |
| Extended Warranty with Calibration Coverage, one year | R&S®CW1 | |
| Extended Warranty with Calibration Coverage, two years | R&S®CW2 | |

Extended warranty with a term of one to two years (WE1 to WE2)

Repairs carried out during the contract term are free of charge ¹⁹. Necessary calibration and adjustments carried out during repairs are also covered. Simply contact the forwarding agent we name; your product will be picked up free of charge and returned to you in top condition a couple of days later.

Extended warranty with calibration (CW1 to CW2)

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 ¹⁹ and calibration at the recommended intervals as well as any calibration carried out during repairs or option upgrades.

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¹⁹ Excluding defects caused by incorrect operation or handling and force majeure. Wear-and-tear parts are not included.

Service that adds value

- | Worldwide
- | Local and personalized
- | Customized and flexible
- | Uncompromising quality
- | Long-term dependability

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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- | Longevity and optimized total cost of ownership

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Certified Environmental Management

ISO 14001

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R&S®FSV Signal and Spectrum Analyzer

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