ROHDE&SCHWARZ

Make ideas real

SIGNAL GENERATOR PORTFOLIO

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	Vector			
	R&S®SMW200A	**R&S®SMM100A**	**R&S®SMBV100B**	**R&S®SGT100A**
	High performance vector signal generator	**Redefining midrange**	**State-of-the-art vector signal generator**	**Vector RF source, fast and compact**
Performance	●●●●●●	●●●●●	●●●●●	●●●●
Main features	► integrated fading simulator ► second RF path ► high performance synchronization of multiple instruments	► very good RF performance ► cost-efficient mmWave solution	► ultra high output power ► excellent EVM and ACPR performance	► fastest frequency and level switching ► smallest standalone vector signal generator
Frequency range	100 kHz to 3/6/7.5/12.75/ 20/31.8/40/44 GHz	100 kHz to 6/7.5/12.75/ 20/31.8/44 GHz	8 kHz to 3/6 GHz	1 MHz to 3/6 GHz
I/Q modulation bandwidth	up to 2 GHz (internal/external)	up to 1 GHz (internal), up to 2 GHz (external)	up to 500 MHz (internal), up to 2 GHz (external)	up to 240 MHz (internal), up to 1 GHz (external)
Peak envelope power (PEP) (at 1 GHz/10 GHz)	+18 dBm/+18 dBm	+18 dBm/+18 dBm	+25 dBm/n.a.	+17 dBm/n.a.
SSB phase noise (at 1 GHz, 1 Hz measurement bandwidth, 20 kHz offset)	< –137 dBc	< –129 dBc	< –126 dBc	< –126 dBc
Harmonics (at 1 GHz)	< –30 dBc (level < +10 dBm); < –55 dBc (f > 3.5 GHz)	< –30 dBc (level < +10 dBm); < –55 dBc (f > 3.5 GHz)	< –30 dBc (level ≤ +13 dBm)	< –30 dBc (level ≤ +8 dBm)
Nonharmonics (at 1 GHz, > 10 kHz offset from carrier)	< –90 dBc (level > –10 dBm)	< –85 dBc	< –76 dBc (level > +10 dBm)	< –76 dBc (level > –10 dBm)
Dimensions (W × H × D)	435 × 192 × 460 mm (171.3 × 75.6 × 181.1 in)	435 × 192 × 460 mm (171.3 × 75.6 × 181.1 in)	344 × 153 × 372 mm (135.4 × 60.2 × 146.5 in)	246 × 52.5 × 401 mm (96.9 × 20.7 × 157.9 in)

All values are specified, if not otherwise stated.

WinIQSIM2™ Generator supports output of digital I/Q signals generated with R&S®WinIQSIM2™ simulation software.

● The higher the number of points, the higher the performance.

The Rohde&Schwarz signal generator portfolio ranges from ultra compact, uniquely fast analog and vector signal sources for production and automated test environments to industry-leading analog and vector signal generators for R&D in the telecommunications, A&D and semiconductor sectors.




			Analog	
R&S®SMCV100B	**R&S®SGS100A/SGU100A**	**R&S®SGS100A**	**R&S®SMA100B**	**R&S®SMB100B**
Vector RF source	**Vector microwave source, fast and compact**	**Vector RF source, fast and compact**	**High performance RF and microwave signal generator**	**RF signal generator, outstanding performance and usability in a compact size**
●●●●	●●●●	●●●●	●●●●●●	●●●●●
► good RF performance ► high output power ► RF DAC design	► very good RF performance up into the microwave range ► cost-efficient, compact frequency extensions	► very good RF performance in a compact format ► wear-free electronic attenuator	► excellent SSB phase noise ► ultra high output power	► very low SSB phase noise ► very high output power
4 kHz to 3/6/7.125 GHz	80 MHz to 20/40 GHz	80 MHz to 6/12.75 GHz	8 kHz to 3/6/12.75/20/ 31.8/40/50/67 GHz	8 kHz to 1/3/6 GHz
up to 240 MHz (internal)	up to 2 GHz (external)	up to 1 GHz (external)	–	–
+20 dBm/n.a.	+15 dBm/+15 dBm	+15 dBm/+15 dBm	+30 dBm/+27 dBm	+26 dBm/n.a.
< –125 dBc	< –126 dBc	< –126 dBc	< –147 dBc	< –126 dBc
< –30 dBc (level ≤ +13 dBm)	< –30 dBc (f > 12 GHz, level ≤ +8 dBm)	< –30 dBc (level ≤ +8 dBm)	< –60 dBc (level = +18 dBm)	< –30 dBc (level ≤ +13 dBm)
< –52 dBc, –60 dBc (typ.) (level > +10 dBm)	< –56 dBc (meas.) (level > –10 dBm, 12 GHz < f ≤ 20 GHz)	< –76 dBc (level > –10 dBm)	<–100 dBc (level = +10 dBm)	< –76 dBc (level > +10 dBm)
222 × 97 × 366 mm (87.4 × 38.2 × 144.1 in)	250 × 105 × 401 mm (98.4 × 41.3 × 157.9 in)	250 × 52.5 × 401 mm (98.4 × 20.7 × 157.9 in)	460 × 107 × 503 mm or 460 × 151 × 503 mm (181.1 × 42.1 × 198.0 in or 181.1 × 59.5 × 198.0 in)	344 × 108 × 372 mm (135.4 × 60.2 × 146.5 in)





					Broadcast
	R&S®SMB100A	**R&S®SMC100A**	**R&S®SGS100A/SGU100A**	**R&S®SGS100A**	**R&S®BTC**
	Microwave signal generator, versatile and compact	**Signal generator, smallest size and best price/performance ratio**	**Analog microwave source, fast and compact**	**Analog RF source, fast and compact**	**High-end broadcast signal generator**
	●●●●●	●●●	●●●●	●●●●	●●●●●
	► wide frequency range ► high output power	► high output level ► minimized total cost of ownership	► very good RF performance up into microwave range ► compact format	► very good RF performance in a compact format ► wear-free electronic attenuator	► combined signal generator and DUT analyzer ► realtime signal generator
	100 kHz to 12.75/20/31.8/40 GHz	9 kHz to 1.1/3.2 GHz	10 MHz to 20/40 GHz	1 MHz to 6/12.75 GHz	100 kHz to 3/6 GHz
	–	–	–	–	160 MHz (internal), up to 2 GHz (external)
	+19 dBm/+19 dBm	+13 dBm/n.a.	+15 dBm/+15 dBm	+15 dBm/+15 dBm	+18 dBm/n.a.
	< –122 dBc	< –105 dBc	< –126 dBc	< –126 dBc	< –131 dBc
	< –58 dBc (level ≤ +10 dBm)	< –30 dBc (level ≤ +8 dBm)	< –30 dBc (f > 12 GHz, level ≤ +8 dBm)	< –30 dBc (level ≤ +8 dBm)	< –30 dBc (level < 10 dBm)
	< –70 dBc (level > –10 dBm)	< –60 dBc (level > –10 dBm)	< –56 dBc (meas.) (level > –10 dBm, 12 GHz < f ≤ 20 GHz)	< –76 dBc (level > –10 dBm)	< –90 dBc (level > –10 dBm)
	344 × 112 × 418 mm (135.4 × 44.1 × 164.6 in)	236 × 112 × 368 mm (92.9 × 44.1 × 144.9 in)	250 × 105 × 401 mm (98.4 × 41.3 × 157.9 in)	250 × 52.5 × 401 mm (98.4 × 20.7 × 157.9 in)	435 × 192 × 460 mm (171.3 × 75.6 × 181.1 in)





R&S®SFC	R&S®SFC-U	R&S®SLG	R&S®CLGD	R&S®SFD
Compact modulator, stand-alone, economical broadcast signal source	**Compact USB modulator, for use with a PC**	**Satellite load generator**	**Multichannel DOCSIS cable load generator**	**Single-channel DOCSIS cable signal generator**
●●●	●●●	●●●●	●●●●	●●●
► high-precision modulator ► transport stream player and audio/video generator	► high-precision modulator ► transport stream player and audio/video generator	► up to 32 simultaneous transponder signals ► high signal quality (40 dB MER (typ.))	► DOCSIS 3.1/3.0, J.83/A/B/C and analog TV ► up to eight times 192 MHz signal bandwidth	► DOCSIS 3.1/3.0, J.83/A/B/C and analog TV ► up to 192 MHz signal bandwidth
30 MHz to 3 GHz	30 MHz to 3 GHz	250 MHz to 3.225 GHz	upstream: 5 MHz to 204 MHz, downstream: 47 MHz to 1794 MHz	upstream: 5 MHz to 204 MHz, downstream: 47 MHz to 1794 MHz
up to 35 MHz (internal/external)	up to 35 MHz (internal/external)	500 MHz (internal)	up to 8 × 200 MHz (internal)	200 MHz (internal)
+13.5 dBm/n.a.	+13.5 dBm/n.a.	+2.5 dBm/n.a.	+62 dBmV/n.a.	+62 dBmV/n.a.
< –100 dBc (typ.)	< –100 dBc (typ.)	–	–	–
typ. < –30 dBc (level ≤ 0 dBm)	typ. < –30 dBc (level ≤ 0 dBm)	–	–	–
< –55 dBc (level ≥ –20 dBm)	< –55 dBc (level ≥ –20 dBm)	< –50 dBc (bands 2 and 3)	< –63 dBc	< –63 dBc
229 × 54.4 × 406 mm (90.2 × 21.4 × 159.8 in)	177 × 40 × 241 mm (69.7 × 15.8 × 94.9 in)	482.6 × 44.5 × 279.4 mm (190 × 17.5 × 110 in)	462 × 105 × 406 mm (181.9 × 41.3 × 159.8 in)	233 × 107 × 372 mm (91.7 × 42.1 × 146.5 in)

FREQUENCY MULTIPLIER AND UPCONVERTER PORTFOLIO

	Frequency multiplier R&S®SMZ	RF upconverter R&S®SZV100A	I/Q upconverter R&S®SZU100A
	Microwave and mmWave frequency multiplier	Q/V band RF upconverter	I/Q upconverter for use with R&S®SMW200A
Performance	●●●●●	●●●●●	●●●●●
Main features	► wide frequency range ► wide dynamic range	► continuous frequency range ► high output power	► flat frequency response ► high spectral purity paired with high dynamic range
Frequency range	50/60/75/110 GHz to 75/90/110/170 GHz	36 GHz to 56 GHz	58.32 GHz to 64.80 GHz
I/Q modulation bandwidth	–	analog modulation bandwidth up to 2 GHz	up to 2 GHz (external)
Peak envelope power (PEP)	170 GHz model: +8 dBm (typ.)	+15 dBm in specified frequency range	+5 dBm in specified frequency range
SSB phase noise (at 1 GHz, 1 Hz measurement bandwidth, 20 kHz offset)	–	–	< –93 dBc at 60.48 GHz
Harmonics (at 1 GHz)	< –20 dBc (typ.) in specified frequency range	< –30 dBc in specified frequency range	< –50 dBc in specified frequency range
Nonharmonics (at 1 GHz, > 10 kHz offset from carrier)	< –20 dBc (typ.) in specified frequency range	–70 dBc (typ.) in specified frequency range	< –50 dBc in specified frequency range
Dimensions (W × H × D)	114 × 78 × 278 mm (44.9 × 30.7 × 109.5 in)	125 × 90 × 300 mm (49.2 × 35.4 × 118.1 in)	125 × 90 × 300 mm (49.2 × 35.4 × 118.1 in)

All values are specified, if not otherwise stated.

FROM PRESALES TO SERVICE. AT YOUR DOORSTEP.

3 year warranty

The Rohde&Schwarz network in over 70 countries ensures optimum on-site support by highly qualified experts. User risks are reduced to a minimum at all stages of the project:

- Solution finding/purchase
- Technical startup/application development/integration
- Training
- Operation/calibration/repair

R&S®LegacyPro

R&S®LegacyPro: refresh your technology

Trade in your legacy signal generators

For older test systems, the challenge of maintaining outdated test equipment is commonplace. When individual pieces of equipment become obsolete before the entire ATE system does, regular calibration and repair of the obsolete equipment becomes expensive and very time-consuming. Replacing the obsolete test equipment with equivalent, state-of-the-art instruments should be straightforward and require minimal hardware and software changes. In reality, it can be a challenging task.

The R&S®LegacyPro code emulation makes this a straightforward task, reducing the workload and eliminating risks. R&S®LegacyPro enables new signal generators to reliably emulate a wide range of legacy generators from vendors such as Keysight, Agilent, HP, Anritsu and Rohde&Schwarz. As a result, new signal generators can be deployed in legacy systems without major software changes, effectively increasing uptime, lowering the cost of ownership and lengthening the test system's useful life.

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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Service that adds value
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- ► Local and personalized
- ► Customized and flexible
- ► Uncompromising quality
- ► Long-term dependability

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