

Specifications in brief

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Frequency range	R&S®SMBB-B101	8 kHz to 1 GHz
	R&S®SMBB-B103	8 kHz to 3 GHz
	R&S®SMBB-B106	8 kHz to 6 GHz
Level		
Maximum specified output power (PEP)	R&S®SMBB-B101/-B103/-B106	
	standard	
	200 kHz < f ≤ 1 MHz	-110 dBm to +13 dBm
	1 MHz < f ≤ 10 MHz	-110 dBm to +18 dBm
	10 MHz < f ≤ 6 GHz	-127 dBm to +18 dBm
	with R&S®SMBB-K31 option	
	200 kHz < f ≤ 1 MHz	-110 dBm to +13 dBm
	1 MHz < f ≤ 10 MHz	-110 dBm to +21 dBm
	10 MHz < f ≤ 4 GHz	-127 dBm to +21 dBm
	4 GHz < f ≤ 6 GHz	-127 dBm to +20 dBm
	with R&S®SMBB-B32 and R&S®SMBB-K31 options	
200 kHz < f ≤ 10 MHz	-110 dBm to +21 dBm	
10 MHz < f ≤ 6 GHz	-127 dBm to +26 dBm	
Spectral purity		
SSB phase noise	f = 1 GHz, 20 kHz offset, 1 Hz measurement bandwidth	< -126 dBc, -132 dBc (typ.)
Harmonics	1 MHz < f ≤ 6 GHz; level ≤ 13 dBm	< -30 dBc
Nonharmonics	CW, level > +10 dBm; offset > 10 kHz from carrier	
	f ≤ 750 MHz	< -80 dBc
	750 MHz < f ≤ 1500 MHz	< -76 dBc
	1500 MHz < f ≤ 3 GHz	< -70 dBc
	3 GHz < f ≤ 6 GHz	< -64 dBc
Modulation	with R&S®SMBB-K720 option	AM, FM, φM
	with R&S®SMBB-K22 option	pulse modulation
	rise/fall time	10% to 90% of RF amplitude, f > 80 MHz
	transition type: fast	< 15 ns, 5 ns (meas.)
	on/off ratio	> 80 dB
	minimum pulse width	50%/50% of RF amplitude,
	transition type: fast	< 20 ns
Compatible command sets	command sets can be used to emulate another instrument; a subset of common commands is supported	Aeroflex (IFR/Marconi), Agilent/Keysight Technologies, Hewlett Packard, Anritsu, Panasonic, Racal Dana (more details in the data sheet)

Always up-to-date

The firmware can be updated using an USB storage device or the LAN port.

Free firmware updates are downloadable from the Internet at www.rohde-schwarz.com.

Ordering information

Designation	Type	Order No.
R&S®SMBB-Bxxx = hardware option		
R&S®SMBB-Kxxx = software/keycode option		
Base unit		
Signal Generator, including power cable and quick start guide	R&S®SMB100B	1422.1000.02
Frequency options ¹⁾		
8 kHz to 1 GHz	R&S®SMBB-B101	1422.5005.02
8 kHz to 3 GHz	R&S®SMBB-B103	1422.5105.02
8 kHz to 6 GHz	R&S®SMBB-B106	1422.5205.02
Reference oscillator options		
OCXO Reference Oscillator ²⁾	R&S®SMBB-B1	1422.5305.02
High Performance OCXO Reference Oscillator ²⁾	R&S®SMBB-B1H	1422.5405.02
100 MHz, 1 GHz Ultra Low Noise Reference Input and Output	R&S®SMBB-B3	1422.5505.02
Variable Reference Input from 1 MHz to 100 MHz	R&S®SMBB-K704	1422.6301.02
Output power options		
High Output Power, 1/3/6 GHz	R&S®SMBB-K31	1422.5705.02
Ultra High Output Power 1/3/6 GHz ³⁾	R&S®SMBB-B32	1422.5740.02
Analog modulation options		
High Performance Pulse Modulator	R&S®SMBB-K22	1422.5905.02
Pulse Generator	R&S®SMBB-K23	1422.6001.02
Multifunction Generator	R&S®SMBB-K24	1422.6053.02
Pulse Train ⁴⁾	R&S®SMBB-K27	1422.6101.02
AM/FM/φM	R&S®SMBB-K720	1422.6201.02
Stereo/RDS Coder ⁵⁾	R&S®SMBB-B5	1422.5605.02
Other options		
Remote Control Interface (GPIB and USB)	R&S®SMBB-B86	1422.5805.02
Recommended extras		
19" Rackmount Kit	R&S®ZZA-KNA23	1177.8084.00
Power Sensor, 10 MHz to 18 GHz, for levels up to 15 W	R&S®NRP18S-20	1424.6738.02
USB Interface Cable for R&S®NRPS18-20	R&S®NRP-ZKU	1419.0658.02
USB Serial Adapter for RS-232 remote control	R&S®TS-USB1	6124.2531.00
Documentation		
Documentation of Calibration Values	R&S®DCV-2	0240.2193.18
R&S®SMB100B Accredited Calibration	R&S®SMBB-ACA	1422.6147.02

Warranty		
Base unit		3 years
All other items ⁶⁾		1 year
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 Accredited Calibration Coverage, one year	R&S®AW1	
Extended Warranty with Accredited Calibration Coverage, two years	R&S®AW2	

¹⁾ The base unit must be ordered together with an R&S®SMBB-B101, R&S®SMBB-B103 or R&S®SMBB-B106 frequency option.

²⁾ Only one of the R&S®SMBB-B1 or R&S®SMBB-B1H options can be installed.

³⁾ Requires the R&S®SMBB-K31 option.

⁴⁾ Requires the R&S®SMBB-K23 option.

⁵⁾ Requires the R&S®SMBB-K720 option.

⁶⁾ For options that are installed, the remaining base unit warranty applies if longer than 1 year. Exception: all batteries have a 1 year warranty.