

스펙

SMW200A 벡터 신호 발생기



Frequency		
Frequency range, RF path A	R&S®SMW-B103	100 kHz to 3 GHz
	R&S®SMW-B106	100 kHz to 6 GHz
	R&S®SMW-B112	100 kHz to 12.75 GHz
	R&S®SMW-B120	100 kHz to 20 GHz
	R&S®SMW-B131	100 kHz ~ 31.8 GHz
	R&S®SMW-B140/-B140N	100 kHz ~ 40 GHz
Frequency range, RF path B (optional, see R&S®SMW200A data sheet for possible RF path configurations)	R&S®SMW-B203	100 kHz ~ 3 GHz
	R&S®SMW-B206	100 kHz ~ 6 GHz
	R&S®SMW-B212	100 kHz ~ 12.75 GHz
	R&S®SMW-B220	100 kHz ~ 20 GHz
Setting time	SCPI mode	< 1.2 ms, 600 μs (typ.)
Level		
Specified level range	$3 \text{ MHz} \leq f < 20 \text{ GHz}$	-120 dBm to +18 dBm (PEP)
	R&S®SMW-B131, R&S®SMW-B140/-B140N	-120 dBm to +15/+18 dBm (PEP), depending on RF
Setting time	SCPI mode	< 1 ms, 600 μs (typ.)
	R&S®SMW-B120/-B131/-B140/-B140N/-B220, with switching of the mechanical step attenuator	< 25 ms
Spectral purity		
Harmonics	level < 10 dBm, CW	< -30 dBc
	R&S®SMW-B120/-B131/-B140/-B140N/-B220, $f > 3.5 \text{ GHz}$	< -55 dBc
Nonharmonics	CW or vector modulation with full-scale DC input, level > -10 dBm, carrier offset > 10 kHz, $200 \text{ MHz} < f \leq 1500 \text{ MHz}$	
	standard	< -80 dBc
	with R&S®SMW-B22 option	< -90 dBc
SSB phase noise	CW, carrier offset = 20 kHz, $f = 1 \text{ GHz}$	
	standard	< -131 dBc, -135 dBc
	with R&S®SMW-B22 option	< -136 dBc, -139 dBc
	CW, carrier offset = 20 kHz, $f = 10 \text{ GHz}$	
	standard	< -111 dBc, -115 dBc
	with R&S®SMW-B22 option	< -116 dBc, -119 dBc
Analog modulation		
Supported analog modulation modes		AM, FM (optional), φM (optional), pulse (optional)
I/Q modulation		
RF modulation bandwidth	with internal wideband baseband, "I/Q wideband" on	
	$300 \text{ MHz} \leq f \leq 2.5 \text{ GHz}$	±40 % of carrier frequency
	$f > 2.5 \text{ GHz}$	±1 GHz
	with internal standard baseband, "I/Q wideband" on, $f \geq 250 \text{ MHz}$	
		±80 MHz
Modulation frequency response in specified RF modulation bandwidth	with internal wideband baseband, "I/Q wideband" on	
		< 1.0 dB, < 0.4 dB (meas.)
Wideband baseband generator		
	R&S®SMW-B9 option, up to 2 baseband generators can be installed	
Signal bandwidth	depending on options	up to 2000 MHz
ARB memory depth	depending on options	up to 2 Gsample
Frequency offset	depending on options	up to -1000 MHz to + 1000 MHz
Standard baseband generator		
	R&S®SMW-B10 option, up to two baseband generators can be installed	
Signal bandwidth	depending on options	up to 160 MHz
ARB memory depth	depending on options	up to 1 Gsample
Frequency offset	depending on options	up to -80 MHz to +80 MHz
Digital standards		
Supported standards and modulation systems		5G air interface candidates, LTE Release 8/9/10/11,12, 3GPP FDD/HSPA/HSPA+, GSM/EDGE/EDGE Evolution, CDMA2000®, 1xEV-DO Rev. A/B, WLAN IEEE 802.11a/b/g/n/j/p/ac/ad, AWGN and more
Fading and MIMO		
Fading simulator	R&S®SMW-B14 option, up to four fading modules can be installed	
Fading bandwidth		max. 160 MHz
Fading channels	depending on options	max. 32
MIMO fading scenarios	depending on options	2x2, 4x2, 2x4, 3x3, 4x4, , 8x4, 4x8, 8x2, 2x8, 4x2x2 and more
Fading modes	depending on options	Multipath, moving delay, birth-death, high-speed train, two-channel interferer
Fading profiles	depending on options	Rayleigh, Rice, pure Doppler, Static path, Gauss, and more