R&S®SMA100B

RF and microwave signal generator

ROHDE&SCHWARZ

Product Flyer | Version 02.00

Many success stories start with a clear signal. The R&S®SMA100B analog signal generator is the right choice when it comes to developing superior future products. It is the only RF and microwave generator to deliver ultrapure output signals while providing extremely high output power – in a previously unmatched dimension.

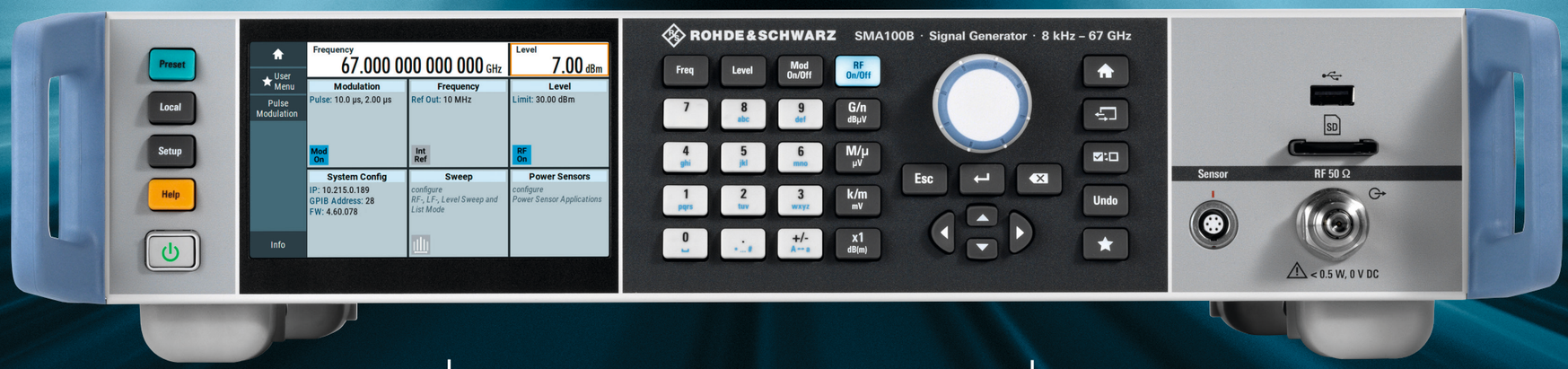
This gives Rohde & Schwarz customers an economic and technical competitive edge to help them stay innovative. Thanks to the new R&S®SMA100B, they can design improved components and products.

A new benchmark for product testing and development

Appropriate options provide very high output power without compromise

Exceptionally low phase and wideband noise

High output power in combination with low harmonics



Conveniently upgrade your technology and replace obsolete signal generators

Scalable housing size for easy replacement of signal generators, e.g. in ATE racks

Specifications in brief

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Frequency			
Frequency range	R&S®SMAB-B103	8 kHz to 3 GHz	
	R&S®SMAB-B106	8 kHz to 6 GHz	
	R&S®SMAB-B112	8 kHz to 12.75 GHz	
	R&S®SMAB-B120	8 kHz to 20 GHz	
	R&S®SMAB-B131	8 kHz to 31.8 GHz	
	R&S®SMAB-B140/-B140N	8 kHz to 40 GHz	
	R&S®SMAB-B150/-B150N	8 kHz to 50 GHz	
	R&S®SMAB-B167/-B167N	8 kHz to 67 GHz (overrange up to 72 GHz)	
Level			
Maximum specified output power (PEP)	R&S®SMAB-B103/-B106	f = 3 GHz	f = 6 GHz
	standard	+19 dBm	+19 dBm
	with R&S®SMAB-K31	+25 dBm	+25 dBm
	with R&S®SMAB-K31 and R&S®SMAB-B32	+30 dBm	+30 dBm
	R&S®SMAB-B112/-B120	f = 12.75 GHz	f = 20 GHz
	standard	+18 dBm	+17 dBm
	with R&S®SMAB-K33	+20 dBm	+20 dBm
	with R&S®SMAB-K33 and R&S®SMAB-B34	+27 dBm	+24 dBm
	R&S®SMAB-B131/-B140/-B140N	f = 31.8 GHz	f = 40 GHz
	standard	+13 dBm	+13 dBm
	with R&S®SMAB-B35	+17 dBm	+16 dBm
	with R&S®SMAB-B35 and R&S®SMAB-K36	+22 dBm	+20 dBm
	R&S®SMAB-B150/-B150N/-B167/-B167N	f = 50 GHz	f = 67 GHz
	standard	+5 dBm	+5 dBm
	with R&S®SMAB-B37/-B39	+11 dBm	+9 dBm
	with R&S®SMAB-B37/-B39 and R&S®SMAB-K38/-K40	+18 dBm	+10 dBm
Spectral purity			
SSB phase noise	f = 1 GHz, 1 Hz measurement bandwidth		
	standard, carrier offset = 20 kHz	< –135 dBc, –140 dBc (typ.)	
	with R&S®SMAB-B709, carrier offset = 10 kHz	< –140 dBc	
	with R&S®SMAB-B710(N), carrier offset = 10 kHz	< –140 dBc, –145 dBc (typ.)	
	with R&S®SMAB-B711(N), carrier offset = 10 kHz	< –147 dBc, –152 dBc (typ.)	
	f = 10 GHz, 1 Hz measurement bandwidth		
	standard, carrier offset = 20 kHz	–115 dBc, –120 dBc (typ.)	
	with R&S®SMAB-B709, carrier offset = 10 kHz	< –120 dBc	
	with R&S®SMAB-B710, carrier offset = 10 kHz	–120 dBc, –125 dBc (typ.)	
	with R&S®SMAB-B711, carrier offset = 10 kHz	–128 dBc, –132 dBc (typ.)	
Harmonics			
Instruments equipped with R&S®SMAB-B103/-B106 and R&S®SMAB/-K31/-B32 options			
	10 MHz < f ≤ 6 GHz, P = 18 dBm	< –60 dBc	
Instruments equipped with R&S®SMAB-B112/-B120 and R&S®SMAB-K33/-B34 options			
	10 MHz < f ≤ 20 GHz, P = 16 dBm	< –55 dBc	
Instruments equipped with R&S®SMAB-B131/-B140(N)/-B150(N)/-B167(N) and R&S®SMAB-B35/-K36/-B37/-K38/-B39/-K40 options			
	10 MHz < f ≤ 31.8 GHz, P = 13 dBm	< –55 dBc	
	31.8 GHz < f ≤ 40 GHz, P = 13 dBm	< –60 dBc (meas.)	
	40 GHz < f ≤ 42.5 GHz, P = 13 dBm	< –50 dBc (meas.)	
Nonharmonics	f = 1 GHz, > 10 kHz from carrier, 10 dBm	< –92 dBc	
	f = 1 GHz, > 10 kHz from carrier, 10 dBm with R&S®SMAB-B711(N) option	< –100 dBc	
Supported modulation modes	with R&S®SMAB-K720 option	AM, FM, φM	
	with R&S®SMAB-K721 option	scan AM	
Pulse modulation	with R&S®SMAB-K22 option		
Rise/fall time	f > 700 MHz	< 10 ns, 5 ns (typ.)	
On/off ratio		> 80 dB	
Minimum pulse width		< 20 ns	

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.

Sustainable product design

- Environmental compatibility and eco-footprint
- Energy efficiency and low emissions
- Longevity and optimized total cost of ownership

Certified Quality Management
ISO 9001

Certified Environmental Management
ISO 14001

Rohde&Schwarz GmbH&Co. KG
www.rohde-schwarz.com

Rohde&Schwarz training
www.training.rohde-schwarz.com

Regional contact

- Europe, Africa, Middle East | +49 89 4129 12345
  customersupport@rohde-schwarz.com
- North America | 1 888 TEST RSA (1 888 837 87 72)
  customer.support@rsa.rohde-schwarz.com
- Latin America | +1 410 910 79 88
  customersupport.la@rohde-schwarz.com
- Asia Pacific | +65 65 13 04 88
  customersupport.asia@rohde-schwarz.com
- China | +86 800 810 82 28 | +86 400 650 58 96
  customersupport.china@rohde-schwarz.com

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