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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde and Schwarz BBA100 Broadband Amplifier System

Rohde & Schwarz BBA100 Broadband Amplifier System The R&S BBA100 is a modular solid-state broadband amplifier family for EMC, communications, research, and physical engineering. Instantaneous coverage is 9 kHz to 1 GHz in three bands: 9 kHz to 250 MHz, 80 MHz to 400 MHz, and 250 MHz to 1 GHz. Nominal power classes run 70 W to 1700 W depending on band. A 5 HU 19 inch base unit holds the system controller, RF paths, and monitoring. Extension units add power or extra bands. Amplifiers are 100 percent mismatch tolerant. Modulation includes AM, FM, phase, and pulse. The later BBA150 family extends coverage to 6 GHz. The R&S BBA100 is a modular solid-state broadband amplifier family for EMC, communications, research, and physical engineering. Instantaneous coverage is 9 kHz to 1 GHz in three bands: 9 kHz to 250 MHz, 80 MHz to 400 MHz, and 250 MHz to 1 GHz. Nominal power classes run 70 W to 1700 W depending on band. A 5 HU 19 inch base unit holds the system controller, RF paths, and monitoring. Extension units add power or extra bands. Amplifiers are 100 percent mismatch tolerant. Modulation includes AM, FM, phase, and pulse. The later BBA150 family extends coverage to 6 GHz. IEC/EN EMS immunity driving antennas and poorly matched DUTs



MODEL

Rohde & Schwarz BBA100

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

BBA100

LISTING

<https://aumictechlabs.com/products/bba100-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz BBA100 is a modular broadband amplifier system engineered for RF applications demanding flexible power scaling and multi-band coverage. Operating from 9 kHz to 1 GHz, the BBA100 delivers up to 500 W output power across three frequency bands, with configurations supporting 125 W (9 kHz to 250 MHz), 250 W (80 MHz to 400 MHz), and 125 W (250 MHz to 1 GHz). The integrated system controller manages RF path switching, frequency band selection, and real-time monitoring - eliminating external control complexity. Its 100% mismatch tolerance and short-circuit ruggedness make it suitable for demanding test environments where load conditions vary unpredictably.

Technical Specifications

Frequency Range: 9 kHz to 1 GHz (expandable to 6 GHz with R&S BBA150)

Output Power: Up to 500 W across three frequency bands at launch; up to 1000 W system maximum

RF Path 1: 9 kHz to 250 MHz, 125 W nominal (180 W minimum at saturation)

RF Path 2: 80 MHz to 400 MHz, 250 W nominal

RF Path 3: 250 MHz to 1 GHz, 125 W nominal

Modulation Support: Amplitude, frequency, phase, and pulse modulation

Mismatch Tolerance: 100% - withstands short circuits and open RF outputs

Key Features

- Modular 19" chassis architecture with base unit and optional extension modules
- Scalable design supporting future upgrades for increased power or additional frequency bands
- Integrated system controller with frequency band and RF path management
- Input switch routing central RF signal to selected RF paths
- Sample port switch directing forward and reflected power signals from multiple bands to central ports
- Output switch enabling flexible frequency-to-load routing

Typical Applications

- EMC testing and compliance validation
- RF product development and design validation
- Quality assurance and manufacturing test
- Research and physical engineering
- Radiocommunications system testing

Compatibility & Integration

The BBA100 family integrates with the R&S BBA150 to extend coverage to 6 GHz. The system's internal architecture eliminates the need for external switching equipment or manual signal source reconnection during frequency band transitions.

BBA100 Characteristics / Specifications

PARAMETER	VALUE
Model	BBA100
Manufacturer	Rohde & Schwarz
Instrument Type	Solid state broadband amplifier system
Alias	BBA 100; R&S BBA100
Total Frequency Coverage	9 kHz to 1 GHz (band dependent)
Band Low Frequency	9 kHz to 250 MHz instantaneous
Band Mid Frequency	80 MHz to 400 MHz instantaneous
Band High Frequency	250 MHz to 1 GHz instantaneous
Power Classes Low Band	125 W, 160 W, 250 W, 500 W, 1000 W, 1700 W
Power Classes High Band	70 W, 125 W, 250 W, 450 W, 800 W, 1600 W
Example A125 Nominal Power	125 W (51.0 dBm)
Example A125 Saturation Power	min 180 W (52.6 dBm)
Example A125 P1dB below 220 MHz	min 125 W (51.0 dBm)
Example A125 P1dB at or above 220 MHz	min 112 W (50.5 dBm)
Example A125 Gain without Input Switch	54.5 dB
Example A125 Gain with Input Switch	51.0 dB
Gain Flatness Example A1	plus/minus 2.0 dB
Gain Adjustment Range	greater than 20 dB
Harmonics at 50 W Example A1	less than minus 19 dBc
Harmonics at 125 W Example A1	less than minus 17 dBc
TOI Example A1	min 57.0 dBm (tones 100 kHz apart)
Spurious Offset greater than 100 kHz	nom minus 80 dBc, max minus 60 dBc
Noise Figure Max Gain no Switch	nom less than 13.5 dB
Input Level for Nominal Power no Switch	minus 3.5 dBm
Maximum RF Input	+15 dBm

PARAMETER	VALUE
Maximum DC Input	0 V
Input VSWR	max 2:1 at 50 ohm
Nominal Impedance	50 ohm in and out
Mismatch Protection	100 percent VSWR without damage
Forward Power at VSWR less than	1: without foldback
Sample Coupling Factor	approx 60 dB (optional sample ports)
Detected Sample Level	0.1 V to 3.0 V DC (optional)
Mains	110 V to 240 V AC plus/minus 10 percent, 50 Hz to 60 Hz plus/minus 6 percent
Example A125 Current	less than 7.7 A at 110 V; less than 3.7 A at 230 V
Example A125 Consumption	less than 840 VA
Base Unit Size	430 mm x 250 mm x 710 mm including fans and handles
Rack Height	19 inch 1/1, 5 HU
Base Weight	approx 22 kg
RF Connectors	N female input/output typical; SMA sample ports
Operating Temperature Spec	+25 C ambient for quoted RF tables
Warm Up	15 minutes
Altitude Operation	up to 3000 m
Modulation Capability	AM, FM, phase, pulse Notes Specs from R&S BBA100 specifications (BBA100_dat-sw_en_5214-0753-22). Power, gain, harmonics, and rack current are model-specific. Read the configuration label for installed band and wattage before quoting P1dB.
Operating temperature	Spec: +25 C ambient for quoted RF tables

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Spec: +25 C ambient for quoted RF tables
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Warm Up	15 minutes
Altitude Operation	up to 3000 m
Modulation Capability	AM, FM, phase, pulse Notes Specs from R&S BBA100 specifications (BBA100_dat-sw_en_5214-0753-22). Power, gain, harmonics, and rack current are model-specific. Read the configuration label for installed band and wattage before quoting P1dB.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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PARAMETER	VALUE
Model	BBA100
Manufacturer	Rohde & Schwarz
Instrument Type	Solid state broadband amplifier system
Specifications	
PARAMETER	VALUE
Alias	BBA 100; R&S BBA100
Total Frequency Coverage	9 kHz to 1 GHz (band dependent)
Band Low Frequency	9 kHz to 250 MHz instantaneous
Specifications	
PARAMETER	VALUE
Band Mid Frequency	80 MHz to 400 MHz instantaneous
Band High Frequency	250 MHz to 1 GHz instantaneous
Power Classes Low Band	125 W, 160 W, 250 W, 500 W, 1000 W, 1700 W
Specifications	
PARAMETER	VALUE
Power Classes High Band	70 W, 125 W, 250 W, 450 W, 800 W, 1600 W
Example A125 Nominal Power	125 W (51.0 dBm)
Example A125 Saturation Power	min 180 W (52.6 dBm)
Example A125 P1dB below 220 MHz: min 125 W (51.0 dBm)	
Example A125 P1dB at or above 220 MHz: min 112 W (50.5 dBm)	
Specifications	
PARAMETER	VALUE
Example A125 Gain without Input Switch	54.5 dB
Example A125 Gain with Input Switch	51.0 dB

PARAMETER	VALUE
Gain Flatness Example A125	plus/minus 2.0 dB

Specifications

PARAMETER	VALUE
Gain Adjustment Range	greater than 20 dB
Harmonics at 50 W Example A125	less than minus 19 dBc
Harmonics at 125 W Example A125	less than minus 17 dBc

Specifications

PARAMETER	VALUE
TOI Example A125	min 57.0 dBm (tones 100 kHz apart)
Spurious Offset greater than 100 kHz	nom minus 80 dBc, max minus 60 dBc
Noise Figure Max Gain no Switch	nom less than 13.5 dB

Specifications

PARAMETER	VALUE
Input Level for Nominal Power no Switch	minus 3.5 dBm
Maximum RF Input	+15 dBm
Maximum DC Input	0 V

Specifications

PARAMETER	VALUE
Input VSWR	max 2:1 at 50 ohm
Nominal Impedance	50 ohm in and out
Mismatch Protection	100 percent VSWR without damage

Forward Power at VSWR less than 10:1: without foldback

Specifications

PARAMETER	VALUE
Sample Coupling Factor	approx 60 dB (optional sample ports)
Detected Sample Level	0.1 V to 3.0 V DC (optional)
Mains	110 V to 240 V AC plus/minus 10 percent, 50 Hz to 60 Hz plus/minus 6 percent

Specifications

PARAMETER	VALUE
Example A125 Current	less than 7.7 A at 110 V; less than 3.7 A at 230 V
Example A125 Consumption	less than 840 VA
Base Unit Size	430 mm x 250 mm x 710 mm including fans and handles

Specifications

PARAMETER	VALUE
Rack Height	19 inch 1/1, 5 HU
Base Weight	approx 22 kg
RF Connectors	N female input/output typical; SMA sample ports

Specifications

PARAMETER	VALUE
Operating Temperature Spec	+25 C ambient for quoted RF tables
Warm Up	15 minutes
Altitude Operation	up to 3000 m

Modulation Capability: AM, FM, phase, pulse

Notes

Specs from R&S BBA100 specifications (BBA100_dat-sw_en_5214-0753-22). Power, gain, harmonics, and rack current are model-specific. Read the configuration label for installed band and wattage before quoting P1dB.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.