

R&S® BBA150

Broadband Amplifier

Excellent amplifiers from
4 kHz to 6 GHz with high
power density



R&S®BBA150 Broadband Amplifier At a glance

The R&S®BBA150 broadband amplifier family generates power in the frequency range from 4 kHz to 6 GHz. The compact amplifiers are rugged and feature high availability. They are ideal for amplitude, frequency, phase and pulse modulation. Extensive switching options for input, output and sample ports are available for different applications.



R&S®BBA150-A2500

The R&S®BBA150 broadband amplifiers cover a total of four frequency bands: 9 kHz to 250 MHz, 4 kHz to 400 MHz, 80 MHz to 1 GHz, 0.69 GHz to 3.2 GHz and 2.5 GHz to 6 GHz. They can be used to address a variety of applications, including the various standards for EMS measurements up to 6 GHz. In the industry environment, the R&S®BBA150 broadband amplifiers are suitable for development and product validation tests in quality assurance and in the development and production of components. Other fields of use include research, physical engineering and communications.

The R&S®BBA150 broadband amplifiers are based on a modular, lightweight design that is optimized for the required frequency band. They are available in two versions. The low-power amplifier comes as a 4 HU 19" rackmount that can be used as a desktop model or installed in a rack. Devices with higher power must be installed in racks. The amplifiers are operated either using display and buttons, or via remote control interface (automated operation) or via a web browser.

The modular design allows you to later upgrade the power and frequency range. The comprehensive service concept and global availability of spare parts promote the trust and confidence of customers around the world.

Key facts

- Frequency bands: 9 kHz to 250 MHz, 4 kHz to 400 MHz, 80 MHz to 1.0 GHz, 0.69 GHz to 3.2 GHz, 2.5 GHz to 6.0 GHz
- Output power from 15 W to 3000 W
- 100% mismatch tolerance
- Suitable for amplitude, frequency, phase and pulse modulation
- Three-year warranty and flexible service level agreements

R&S® BBA150

Broadband Amplifier

Benefits and key features

One of the most advanced broadband amplifiers on the market

- Sophisticated RF design
 - Compact and lightweight
 - Series production in one of Europe's most progressive plants
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Reliable with high availability

- Outstanding expertise in amplifier development
 - Cost benefit due to low downtime
- ▷ [page 5](#)

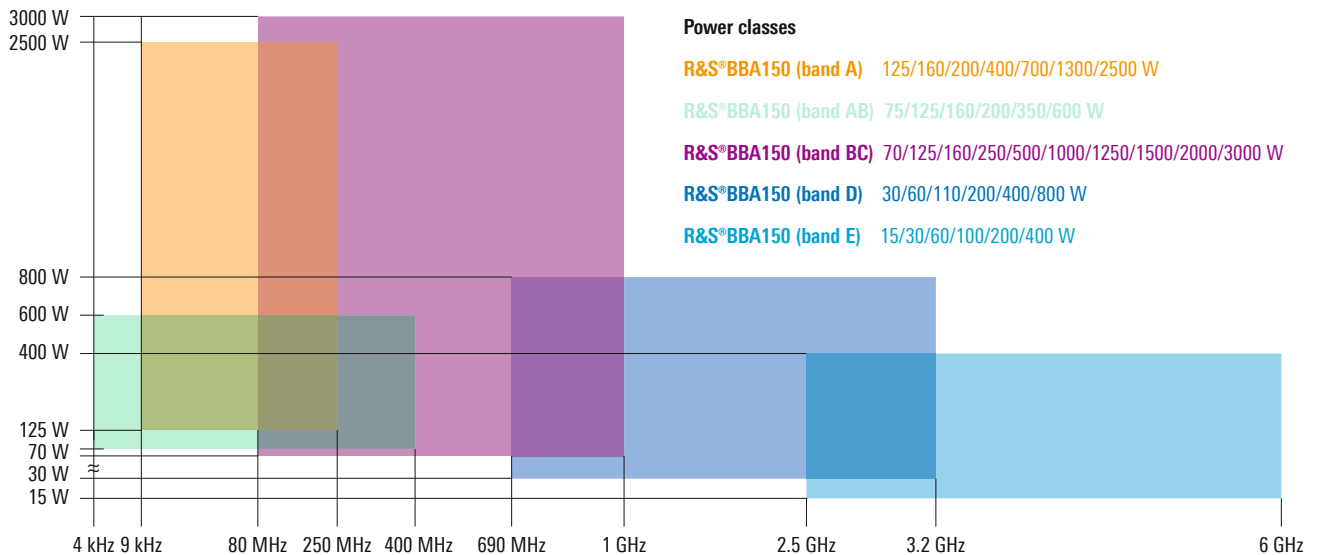
Flexible control and operation

- Manual operation
 - Local and remote operation via web browser and PC
 - Integration into the R&S®EMC32 EMC measurement software
 - Remote control via Ethernet
 - Safety thanks to two different interlocks
- ▷ [page 6](#)

All in one device

- Compact design and modular structure
 - Compact and flexible: twin-band and dual-band amplifiers in four height units
 - Extensive switching options for inputs, outputs and sample ports
- ▷ [page 8](#)

Model overview



One of the most advanced broadband amplifiers on the market

Outstanding RF design in combination with high-quality series production in one of Europe's most progressive plants

Sophisticated RF design

State-of-the-art design and simulation programs used during development, the use of power semiconductors from internationally leading manufacturers and the decades of experience of the Rohde&Schwarz engineers in developing amplifiers produce the most advanced amplifier design currently available. In the frequency band from 2.5 GHz to 6 GHz, semiconductor dice directly bonded onto printed boards make it possible to achieve high output power. As a result, parasitic effects caused by housed transistors are avoided.

Efficiency coupled with ruggedness ensures smooth operation. Lean firmware with effective monitoring and protection mechanisms provides operational safety. Generous dimensioning of the RF amplifier stages provides sufficient margin and ensures compliance with warranted data sheet parameters.

Compact and lightweight

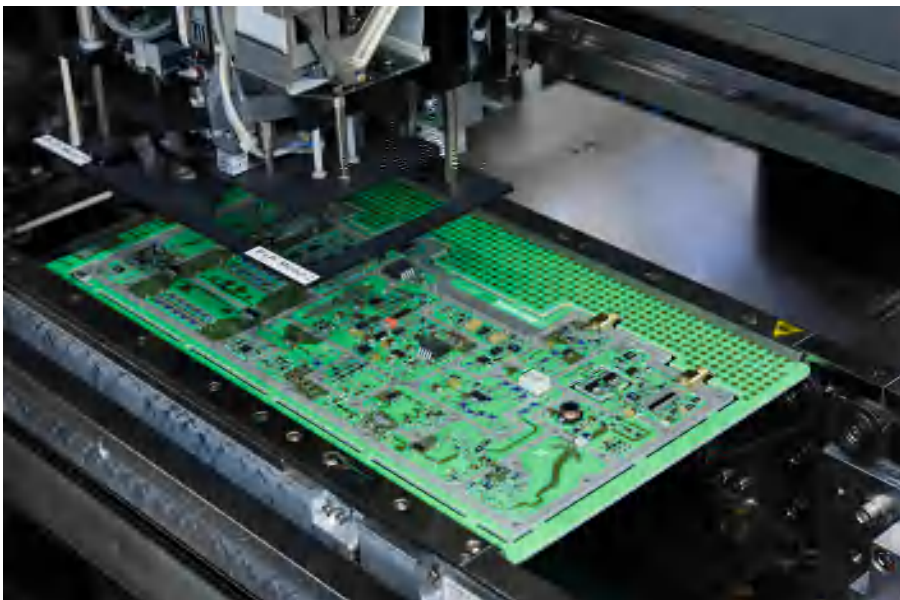
The R&S®BBA150 also sets new standards in terms of mechanical design. Due to its lightweight design and special aluminum-copper heat sink, the R&S®BBA150 weighs only half as much as conventional amplifiers in the same power class. If desired, it is possible to combine different frequency bands in a single amplifier. The RF output power of up to 500 W below 1 GHz and up to 200 W above 1 GHz in just four height units means excellent power density.

Series production in one of Europe's most progressive plants

The R&S®BBA150 broadband amplifiers are series-produced in one of Europe's most progressive plants. The multiple award-winning ¹⁾ Rohde&Schwarz plant in the town of Teisnach (Germany) offers superior manufacturing depth. From precision mechanical engineering and metalworking to printed board production and final assembly, all manufacturing steps are united under the same roof. Automated final test setups ensure that the Rohde&Schwarz plant delivers only specification-compliant products to its customers.

¹⁾ Awards received by the Rohde&Schwarz Teisnach plant include:

- 2010, 2014 Factory of the Year, Germany
- 2013 Best Factory, award winner of European industrial excellence competition
- 2014 Bavarian Quality Award
- 2016 Global Excellence in Operations (GEO) overall award winner, Germany



Automated insertion of components into printed boards at Rohde&Schwarz.

Reliable with high availability

Broadband amplifiers as reliable as the sound and TV broadcast transmitters from Rohde & Schwarz

Outstanding expertise in amplifier development

The R&S®BBA150 broadband amplifiers are highly tolerant to mismatch and rugged enough to handle short-circuiting at the RF end or an open RF output. The expertise gained over many years in the development of power amplifiers is based on the R&D work for Rohde & Schwarz sound and TV broadcast transmitters. Their reliability is well-known and a major reason for the company's global market leadership in digital terrestrial transmitter technology.

Cost benefit due to low downtime

The market launch of the R&S®BBA100 broadband amplifier family in 2010 underscored the Rohde & Schwarz claim to offer stable, reliable amplifiers for maximum customer benefit. Low downtime is an important economic factor. The R&S®BBA150 broadband amplifiers are the next logical step along this path.

Transfer of know-how

All the Rohde & Schwarz sound and TV broadcast transmitter manufacturing know-how has gone into the development of the broadband amplifiers.



1963:
VHF radio transmitter with 2 × 5 kW



2010:
R&S®BBA100
broadband amplifier



2013:
R&S®BBA150
broadband amplifier



2014:
R&S®BBL200
broadband amplifier



2016:
R&S®BBA 130
broadband amplifier

Flexible control and operation

Operation of the R&S®BBA150 is always efficient, including local and remote control and operation via web GUI.

Manual operation

The R&S®BBA150 is directly operated via the display and the buttons on its front panel. This is ideal for use in labs and makes it easy to change settings. A clever menu structure provides straightforward access to all essential information and possible settings; during operation, the RF output power, reflected power and VSWR are displayed.

Local and remote operation via web browser and PC

The web GUI integrated into the R&S®BBA150 is called up via LAN and web browser. The R&S®BBA150 can be conveniently operated via its graphical user interface using a laptop near the amplifier or a control workstation PC. A common web browser (e.g. Google Chrome, Mozilla Firefox, Microsoft Internet Explorer) is all that is needed.



Display and buttons on the R&S®BBA150 front panel.



Operating panel in the web GUI of the R&S®BBA150.

Integration into the R&S®EMC32 EMC measurement software

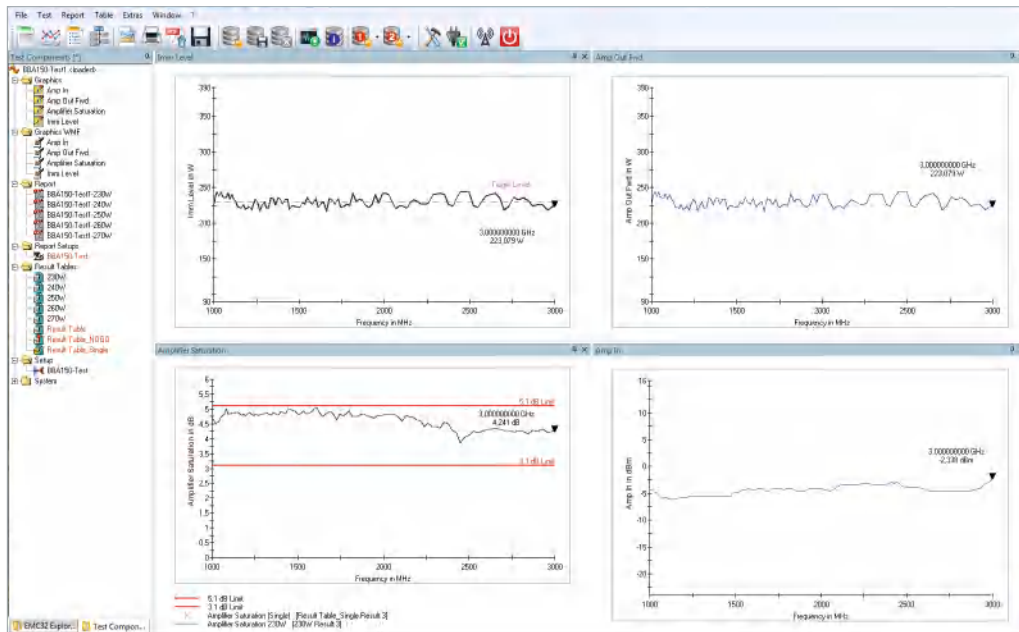
Complex EMC measurement scenarios almost always require the use of higher-level measurement and control software, for example R&S®EMC32. The complete integration of the R&S®BBA150 into the EMC measurement software offers many different options for setting and controlling the amplifier for immunity measurements in line with common standards such as CISPR, IEC, ISO, EN, ETSI, VDE, FCC and ANSI.

Remote control via Ethernet

The standard Ethernet interface makes it possible to automate test sequences using remote control SCPI commands. To make integration especially easy, the IP network address can be set manually or assigned automatically via DHCP.

Safety thanks to two different interlocks

Two different interlocks are available. You can choose the one that best suits your application. The automatic device interlock is supplemented by a second, interactive interlock. The automatic device interlock restarts the amplifier without user interaction as soon as the interlock circuit is closed again. The interactive interlock requires user confirmation before RF power can be output again.



R&S®EMC32 EMC measurement software.



Settings panel in the web GUI of the R&S®BBA150.

All in one device

Flexible amplifier systems with various frequency bands and power classes

Compact design and modular structure

Though compact, the R&S®BBA150 broadband amplifier offers functions that normally involve significantly higher technical investment. The design is optimized for top flexibility in a small footprint. The compact, modular design of the amplifier stages and other components allows the set-up of highly integrated systems based on 19" rackmounts. The frequency and power of these rack units can be flexibly configured.

Compact and flexible: twin-band and dual-band amplifiers in four height units

Two frequency bands can be integrated into a 4 HU desktop model, either as a twin-band or a dual-band amplifier.

Twin-band amplifiers consist of two amplifiers, both with the same frequency band, that operate in parallel. These types of amplifiers are ideal for two-tone measurements and for applications that require the same test setup for multiple tests in a small space. Multiple twin-band units fit in a single rack.

Dual-band amplifiers contain two amplifiers with different frequency bands, and only one of these amplifiers is active at any given time. The optional switches for this option are integrated into the housing. The dual-band amplifiers cover the following frequency ranges: 9 kHz to 1 GHz, 80 MHz to 3.2 GHz and 690 MHz to 6 GHz.



The R&S®BBA150-A2500BC125 amplifier system in a 19" rack with 42 HU contains the following:

- Power amplifier, frequency band A, 2500 W
- Power amplifier, frequency band BC, 125 W
- Input switch
- Output switch
- Sample port switch

Extensive switching options for inputs, outputs and sample ports

Single-band and dual-band amplifiers can be combined to build a single system with multiple frequency bands. Numerous switching options allow you to mix and match the individual amplifiers to obtain the best configuration for your specific application.

Every scenario is covered by flexibly combining the following components:

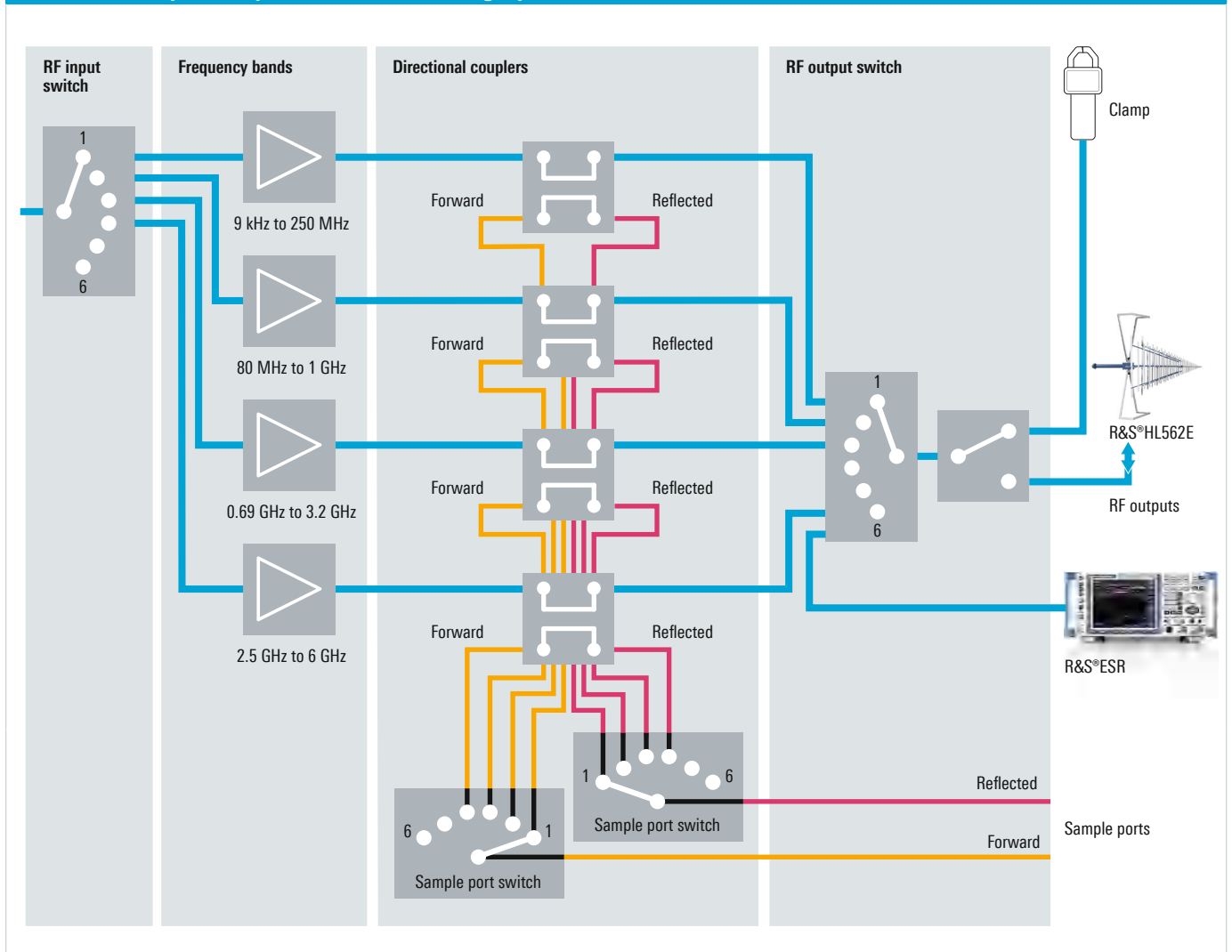
The input switch sets the RF input signal to one of the frequency bands so that a central input can be used without having to disconnect and reconnect the signal source.

Optional sample ports are available to measure the forward and reflected power at the amplifier's output. Sample port switches make the signals from the various frequency bands available at two central outputs.

RF output switches allow flexible connection of the frequency bands to different sinks, e.g. clamps or antennas. Different RF output switches can be configured in an application-specific manner.

All switches in the system are controlled via the built-in system controller. The desired RF path can be selected with a single remote control command or a press of a button. An RF path is the signal path from the input to the output of the amplifier system.

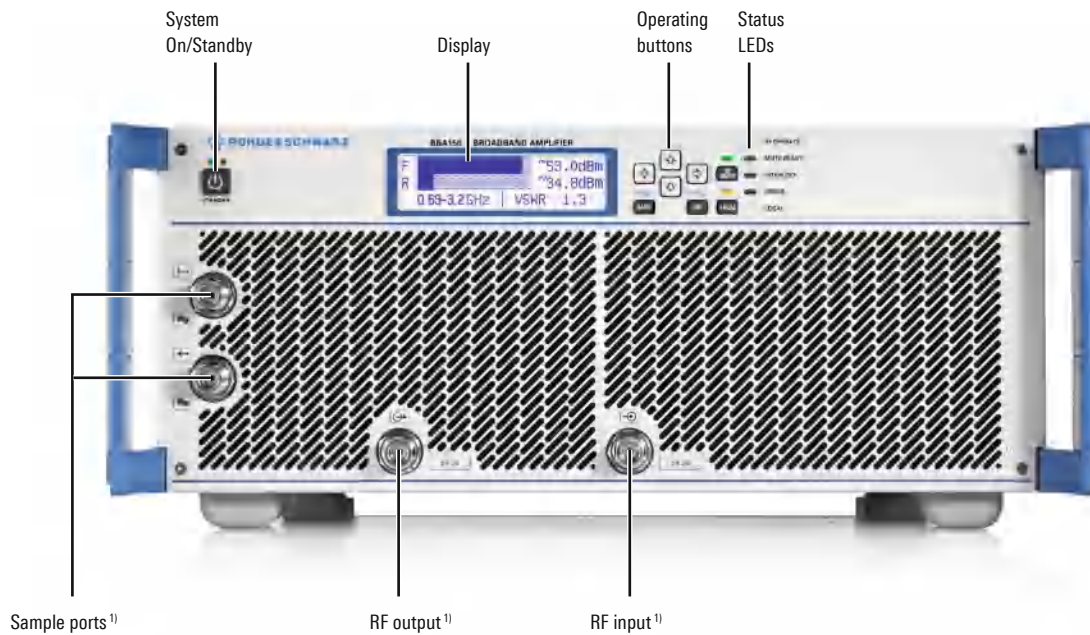
Combined amplifier system with switching options



Functional elements

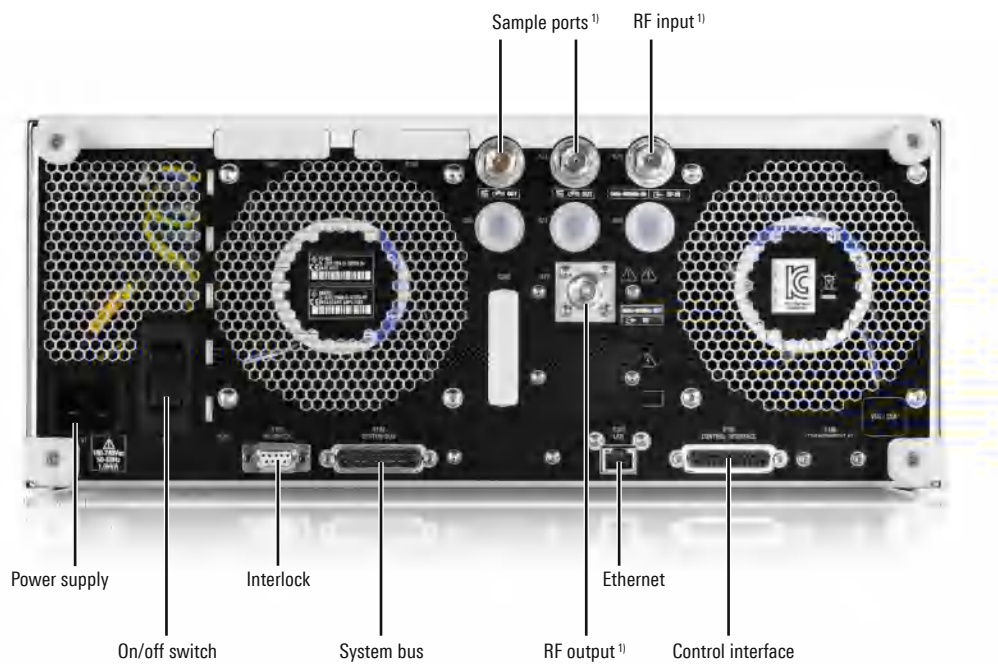
Desktop model

Front view



¹⁾ Optional or configuration-dependent.

Rear view



¹⁾ Optional or configuration-dependent.

Specifications in brief

| Specifications in brief | | |
|--------------------------------------|--|--|
| RF specifications | | |
| Amplifier type | | class A |
| Frequency bands | | <ul style="list-style-type: none"> ■ 9 kHz to 250 MHz, instantaneously ■ 4 kHz to 400 MHz ■ 80 MHz to 1.0 GHz, instantaneously ■ 0.69 GHz to 3.2 GHz, instantaneously ■ 2.5 GHz to 6.0 GHz, instantaneously |
| Nominal output power | 9 kHz to 250 MHz | 125 W to 2500 W |
| | 4 kHz to 400 MHz | 75 W to 600 W |
| | 80 MHz to 1.0 GHz | 70 W to 3000 W |
| | 0.69 GHz to 3.2 GHz | 30 W to 800 W |
| | 2.5 GHz to 6.0 GHz | 15 W to 400 W |
| Nominal output load | | 50 Ω |
| Gain flatness | | ±4.0 dB (or better; see data sheet) |
| Gain adjustment range | | > 15 dB |
| Modulation capability | | AM, FM, φM, PM |
| Nominal input impedance | | 50 Ω |
| Max. RF input level | | max. +15 dBm |
| | 9 kHz to 250 MHz | max. +5 dBm |
| Input level for nominal output power | | -3.4 dBm |
| Nominal output impedance | | 50 Ω |
| Output mismatch tolerance, VSWR | | 100%, without damage |
| RF and sample connectors | | |
| RF input port | | N female |
| RF output port | | N female, 7/16 DIN female or 1 5/8" EIA female |
| RF sample ports | forward output power, optional | N female |
| | reflected output power, optional | N female |
| Detected sample ports | forward output power, optional | N female |
| | reflected output power, optional | N female |
| Graphical user interface | | |
| Local graphical display | | 200 × 48 pixel, monochrome |
| Web GUI | via Ethernet | RJ-45, 10/100 Mbit/s, autonegotiation, half/full duplex |
| Remote control | | |
| Ethernet | | RJ-45, 10/100 Mbit/s, autonegotiation, half/full duplex |
| General data | | |
| Operating voltage range | R&S®BBA150-A125 to -A200/-AB75 to -AB200/-BC70 to -BC250/-D30 to -D110/-E15 to -E100 | 100 V to 240 V AC ± 10%, single phase, 50 Hz to 60 Hz ± 6% |
| | R&S®BBA150-A400/-AB350/-D200/-E200 | 120 V to 240 V AC ± 10%, single phase, 50 Hz to 60 Hz ± 6% |
| | R&S®BBA150-A700/-AB600/-BC500/-BC1000/-D400/-E400 | 200 V to 240 V AC ± 10%, single phase, 50 Hz to 60 Hz ± 6% |
| | R&S®BBA150-A1300/-A2500/-BC1250 to -BC3000/-D800 | 380 V to 415 V AC ± 10%, three phase, with N, 50 Hz to 60 Hz ± 6% |
| Air cooling | | forced air, built-in fans, air entry at front, air exit at rear |
| Dimensions | | |
| Desktop model | incl. fans, handles and feet; W × H × D | 430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in) |
| | for rackmounting | 19" 1/1, 4 HU |
| Rack models (W × H × D) | R&S®BBA150-A700/-BC1000/-D400/-E400 | 19" × 12 HU × 800 mm (31.5 in) |
| | R&S®BBA150-D800 | 19" × 20 HU × 800 mm (31.5 in) |
| | R&S®BBA150-A1300/-BC1250/-BC1500/-BC2000 | 19" × 20 HU × 1000 mm (39.4 in) |
| | R&S®BBA150-A2500 | 19" × 35 HU × 800 mm (31.5 in) |
| | R&S®BBA150-BC3000 | 19" × 35 HU × 1000 mm (39.4 in) |

Specifications in brief

Environmental conditions

| | | |
|---------------------|-----------------------------|---|
| Temperature loading | operating temperature range | 0°C to +40°C |
| | storage temperature range | -20°C to +70°C |
| Damp heat | | max. +40°C at 95% rel. humidity, without condensation |
| Altitude | operating altitude | up to 2000 m |
| | storage altitude | up to 4600 m |

Protection

| | | |
|---------------------------------------|----------|--|
| Load VSWR | | infinite |
| Interlock | | 1 device interlock, 1 configurable interlock |
| Input protection against bias voltage | optional | DC block level ≤ 50 V DC |
| Transient voltage compatibility | | category II, in line with IEC 60364-4-443 |
| Short-circuit breaking capacity | | automatic all-pole 20 A circuit breaker |
| Thermal overload | | shutdown in case of thermal overload |

All specified parameters are valid for an ambient temperature of +25 °C, input impedance of 50 Ω and output impedance of 50 Ω .

For data sheet, see PD 3606.7247.22 and www.rohde-schwarz.com

Ordering information

| Designation | Type | Configuration No. |
|--|------------|-------------------|
| R&S®BBA150 single-band power amplifiers | | |
| Frequency band from 9 kHz to 250 MHz | | |
| 125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A125 |
| 160 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A160 |
| 200 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A200 |
| 400 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A400 |
| 700 W, air-cooled, 12 HU rack model | R&S®BBA150 | BBA150-A700 |
| 1300 W, air-cooled, 20 HU rack model | R&S®BBA150 | BBA150-A1300 |
| 2500 W, air-cooled, 35 HU rack model | R&S®BBA150 | BBA150-A2500 |
| Frequency band from 4 kHz to 400 MHz | | |
| 75 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-AB75 |
| 125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-AB125 |
| 160 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-AB160 |
| 200 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-AB200 |
| 350 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-AB350 |
| 600 W, air-cooled, 12 HU rack model | R&S®BBA150 | BBA150-AB600 |
| Frequency band from 80 MHz to 1.0 GHz | | |
| 70 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC70 |
| 125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC125 |
| 160 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC160 |
| 250 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC250 |
| 500 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC500 |
| 1000 W, air-cooled, 12 HU rack model | R&S®BBA150 | BBA150-BC1000 |
| 1250 W, air-cooled, 20 HU rack model | R&S®BBA150 | BBA150-BC1250 |
| 1500 W, air-cooled, 20 HU rack model | R&S®BBA150 | BBA150-BC1500 |
| 2000 W, air-cooled, 20 HU rack model | R&S®BBA150 | BBA150-BC2000 |
| 3000 W, air-cooled, 35 HU rack model | R&S®BBA150 | BBA150-BC3000 |
| Frequency band from 0.69 GHz to 3.2 GHz | | |
| 30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D30 |
| 60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D60 |
| 110 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D110 |
| 200 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D200 |
| 400 W, air-cooled, 12 HU rack model | R&S®BBA150 | BBA150-D400 |
| 800 W, air-cooled, 20 HU rack model | R&S®BBA150 | BBA150-D800 |
| Frequency band from 2.5 GHz to 6.0 GHz | | |
| 15 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E15 |
| 30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E30 |
| 60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E60 |
| 100 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E100 |
| 200 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E200 |
| 400 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E400 |
| Accessories supplied: power cord, user manual on CD. | | |

| Designation | Type | Configuration No. |
|---|------------|-------------------|
| R&S®BBA150 twin-band power amplifiers ¹⁾ | | |
| Frequency bands 2 x from 9 kHz to 250 MHz | | |
| 75 W/75 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A75A75 |
| 125 W/125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A125A125 |
| 200 W/200 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A200A200 |
| Frequency bands 2 x from 80 MHz to 1 GHz | | |
| 160 W/160 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC160BC160 |
| 250 W/250 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC250BC250 |
| Frequency bands 2 x from 0.69 GHz to 3.2 GHz | | |
| 30 W/30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D30D30 |
| 60 W/60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D60D60 |
| 110 W/110 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D110D110 |
| Frequency bands 2 x from 2.5 GHz to 6.0 GHz | | |
| 30 W/30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E30E30 |
| 60 W/60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E60E60 |
| 100 W/100 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-E100E100 |
| Accessories supplied: power cord, user manual on CD. | | |
| R&S®BBA150 dual-band power amplifiers ¹⁾ | | |
| Frequency bands from 9 kHz to 250 MHz and from 80 MHz to 1 GHz | | |
| 125 W/70 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A125BC70 |
| 125 W/125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A125BC125 |
| 125 W/250 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A125BC250 |
| 160 W/125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A160BC125 |
| 160 W/160 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A160BC160 |
| 200 W/70 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A200BC70 |
| 200 W/125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A200BC125 |
| 200 W/250 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A200BC250 |
| 400 W/125 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A400BC125 |
| 400 W/70 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-A400BC70 |
| Frequency bands from 80 MHz to 1.0 GHz and from 0.69 GHz to 3.2 GHz | | |
| 125 W/30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC125D30 |
| 125 W/60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC125D60 |
| 125 W/110 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC125D110 |
| 250 W/30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC250D30 |
| 250 W/60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC250D60 |
| 250 W/110 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-BC250D110 |
| Frequency bands from 0.69 GHz to 3.2 GHz and from 2.5 GHz to 6.0 GHz | | |
| 30 W/15 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D30E15 |
| 30 W/30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D30E30 |
| 60 W/15 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D60E15 |
| 60 W/30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D60E30 |
| 60 W/60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D60E60 |
| 110 W/30 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D110E30 |
| 110 W/60 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D110E60 |
| 110 W/100 W, air-cooled, 4 HU desktop model | R&S®BBA150 | BBA150-D110E100 |
| Accessories supplied: power cord, user manual on CD. | | |

| Designation | Type | Configuration No. |
|--|--------------|----------------------------|
| Options | | |
| GPIB Remote Control, external converter | R&S®BBA-B101 | 5355.8250.02 |
| GPIB Remote Control, for racks up to 30 HU | R&S®BBA-B101 | 5355.8250.03 |
| GPIB Remote Control, for racks higher than 30 HU | R&S®BBA-B101 | 5355.8250.04 |
| RF Input Switch (1:2 or 2:1, N) | R&S®BBA-B110 | 5355.8866.02 ²⁾ |
| RF Input Switch (1:6, N) | R&S®BBA-B116 | 5355.8950.02 |
| RF Output Switch (2:1 or 1:2, N) | R&S®BBA-B120 | 5355.8795.02 ²⁾ |
| RF Output Switch (2:2, 7/16) | R&S®BBA-B121 | 5355.8895.02 ²⁾ |
| RF Output Switch (2:2, 7/8" EIA) | R&S®BBA-B122 | 5355.8989.02 |
| RF Output Switch (2:2, 1 5/8" EIA) | R&S®BBA-B123 | 5355.8943.02 |
| RF Output Switch (6:1, N) | R&S®BBA-B126 | 5355.8995.02 |
| Fast Amplifier Mute, only for applications above 3 MHz | R&S®BBA-B130 | 5355.8114.02 |
| DC Block Input Protection (N) | R&S®BBA-B132 | 5353.9236.03 |
| RF Forward/RF Reflected Sample Ports (N front) | R&S®BBA-B140 | 5355.8837.02 |
| RF Forward/RF Reflected Sample Ports (N rear) | R&S®BBA-B140 | 5355.8837.03 |
| Detected Forward/Detected Reflected Sample Ports (N front) | R&S®BBA-B141 | 5355.8850.02 |
| Detected Forward/Detected Reflected Sample Ports (N rear) | R&S®BBA-B141 | 5355.8850.03 |
| Sample Port Switch (dual-port, N front) | R&S®BBA-B142 | 5355.8872.02 |
| Sample Port Switch (dual-port, N rear) | R&S®BBA-B142 | 5355.8872.03 |
| Transparent I/O | R&S®BBA-B160 | 5355.8889.02 |

¹⁾ Amplifier systems with two or more frequency bands are available in many combinations. The table shows only a selection of the multiband power amplifiers.

²⁾ The last two digits of the order number depend on the system configuration.

| Service options | | |
|--|--|----------------|
| Frequency Range/Output Power Upgrade | on request | R&S®BBA-UPGR |
| Service Level Agreement BASIC 1, 2 or 3 years | Includes repairs in factory, technical support, software updates, access to Rohde&Schwarz Support Desk | R&S®SB1/2/3AMP |
| Service Level Agreement ADVANCED 1, 2 or 3 years depending on regional availability | Includes repairs in factory or in service center within 9 working days, technical support, remote error analysis, software updates with installation support, access to Rohde&Schwarz Support Desk | R&S®SA1/2/3AMP |
| Service Level Agreement PREMIUM 1, 2 or 3 years depending on regional availability | Includes provision of spare parts and components for quick repair on site, technical support with very short reaction times, remote error analysis, software updates with installation support, access to Rohde&Schwarz Support Desk | R&S®SP1/2/3AMP |
| REGULAR PRODUCT MAINTENANCE 1 year | Periodical inspection and maintenance | R&S®SV1AMP |

For more information, see Service Levels Description for R&S®AMP Amplifier Systems PD 3607.6467.22.

Your local Rohde&Schwarz expert will help you determine the optimum solution for your requirements. To find your nearest Rohde&Schwarz representative, visit www.sales.rohde-schwarz.com

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

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R&S®BBA150 Broadband Amplifier

Data without tolerance limits is not binding | Subject to change

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