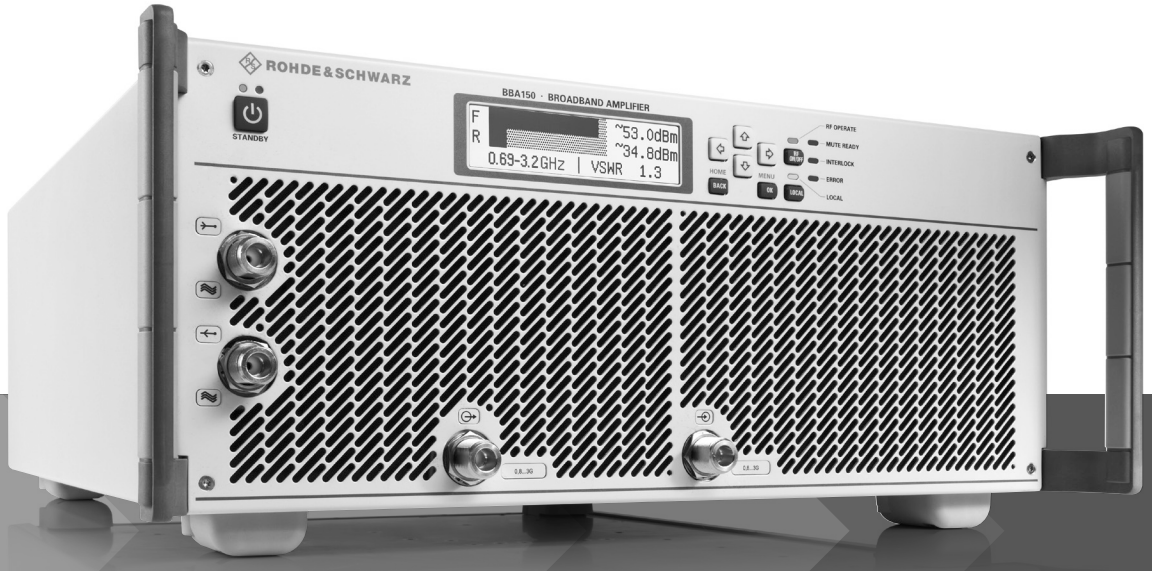
R&S®BBA150
BROADBAND AMPLIFIER

Specifications



Specifications
Version 29.00

ROHDE&SCHWARZ
Make ideas real

CONTENTS

European directives **4**

Definitions **5**

Frequency band A from 9 kHz to 250 MHz **6**

R&S®BBA150-A75, power class: 75 W P1dB 6

R&S®BBA150-A125, power class: 125 W P1dB 8

R&S®BBA150-A160, power class: 160 W P1dB 10

R&S®BBA150-A200, power class: 200 W P1dB 12

R&S®BBA150-A400, power class: 400 W P1dB 14

R&S®BBA150-A700, power class: 700 W P1dB 16

R&S®BBA150-A1300, power class: 1300 W P1dB 18

R&S®BBA150-A2500, power class: 2500 W P1dB 20

Frequency band AB from 4 kHz to 400 MHz **22**

R&S®BBA150-AB75, power class: 75 W P1dB 22

R&S®BBA150-AB125, power class: 125 W P1dB 24

R&S®BBA150-AB160, power class: 160 W P1dB 26

R&S®BBA150-AB200, power class: 200 W P1dB 28

R&S®BBA150-AB350, power class: 350 W P1dB 30

R&S®BBA150-AB600, power class: 600 W P1dB 32

Frequency band BC from 80 MHz to 1 GHz **34**

R&S®BBA150-BC70, power class: 70 W P1dB 34

R&S®BBA150-BC125, power class: 125 W P1dB 36

R&S®BBA150-BC160, power class: 160 W P1dB 38

R&S®BBA150-BC250, power class: 250 W P1dB 40

R&S®BBA150-BC500, power class: 500 W P1dB 42

R&S®BBA150-BC1000, power class: 1000 W P1dB 44

R&S®BBA150-BC1250, power class: 1250 W P1dB 46

R&S®BBA150-BC1500, power class: 1500 W P1dB 48

R&S®BBA150-BC2000, power class: 2000 W P1dB 50

R&S®BBA150-BC3000, power class: 3000 W P1dB 52

Frequency band D from 0.69 GHz to 3.2 GHz **54**

R&S®BBA150-D30, power class: 30 W P1dB 54

R&S®BBA150-D60, power class: 60 W P1dB 56

R&S®BBA150-D110, power class: 110 W P1dB 58

R&S®BBA150-D200, power class: 200 W P1dB 60

R&S®BBA150-D400, power class: 400 W P1dB 62

R&S®BBA150-D800, power class: 800 W P1dB 64

Frequency band E from 2.5 GHz to 6.0 GHz **66**
R&S®BBA150-E15, power class: 15 W P1dB 66
R&S®BBA150-E30, power class: 30 W P1dB 68
R&S®BBA150-E60, power class: 60 W P1dB 70
R&S®BBA150-E100, power class: 100 W P1dB 72
R&S®BBA150-E200, power class: 200 W P1dB 74
R&S®BBA150-E400, power class: 400 W P1dB 76
General data **78**
Modulation specifications 78
Cooling specifications 78
Control specifications 78
Environmental specifications 78
Protection 79
General RF specifications 80
RF switching specifications – input 80
RF switching specifications – output 81
Fast amplifier mute specifications 82
Ordering information **83**
R&S®BBA150 single band power amplifiers 83
R&S®BBA150 twin band power amplifiers 84
R&S®BBA150 dual band power amplifiers 85
Options 86
Accessories 86
Service **87**
Service level agreements 87
Calibration information 87
System upgrades 87

European directives

RoHS Europe, Directive 2011/65/EU:
Equipment category 9, fulfilled without any exceptions.

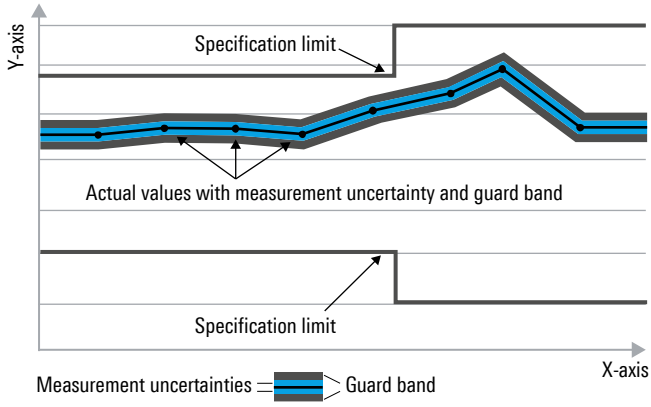
WEEE Europe, Directive 2002/96/EC:
No disposing with unsorted municipal waste; no return with collection of waste electrical and electronic equipment from private households. Separate collection necessary. Ask Rohde & Schwarz representatives about recovery.

Definitions

General
Product data applies under the following conditions:

- 15 minutes of warm-up operation
- All specified parameters are valid for an ambient temperature of +25 °C, input impedance of 50 Ω and output impedance of 50 Ω
- Specified environmental conditions met
- Recommended calibration interval adhered to
- All internal automatic adjustments performed, if applicable

Specifications with limits
Represent warranted product performance by means of a range of values for the specified parameter. These specifications are marked with limiting symbols such as <, ≤, >, ≥, ±, or descriptions such as maximum, limit of, minimum. Compliance is ensured by testing or is derived from the design. Test limits are narrowed by guard bands to take into account measurement uncertainties, drift and aging, if applicable.



Non-traceable specifications with limits (n. trc.)
Represent product performance that is specified and tested as described under “Specifications with limits” above. However, product performance in this case cannot be warranted due to the lack of measuring equipment traceable to national metrology standards. In this case, measurements are referenced to standards used in the Rohde & Schwarz laboratories.

Specifications without limits
Represent warranted product performance for the specified parameter. These specifications are not specially marked and represent values with no or negligible deviations from the given value (e.g. dimensions or resolution of a setting parameter). Compliance is ensured by design.

Typical data (typ.)
Characterizes product performance by means of representative information for the given parameter. When marked with <, > or as a range, it represents the performance met by approximately 80 % of the instruments at production time. Otherwise, it represents the mean value.

Nominal values (nom.)
Characterize product performance by means of a representative value for the given parameter (e.g. nominal impedance). In contrast to typical data, a statistical evaluation does not take place and the parameter is not tested during production.

Measured values (meas.)
Characterize expected product performance by means of measurement results gained from individual samples.

Uncertainties
Represent limits of measurement uncertainty for a given measurand. Uncertainty is defined with a coverage factor of 2 and has been calculated in line with the rules of the Guide to the Expression of Uncertainty in Measurement (GUM), taking into account environmental conditions, aging, wear and tear.

Device settings and GUI parameters are designated with the format “parameter: value”.

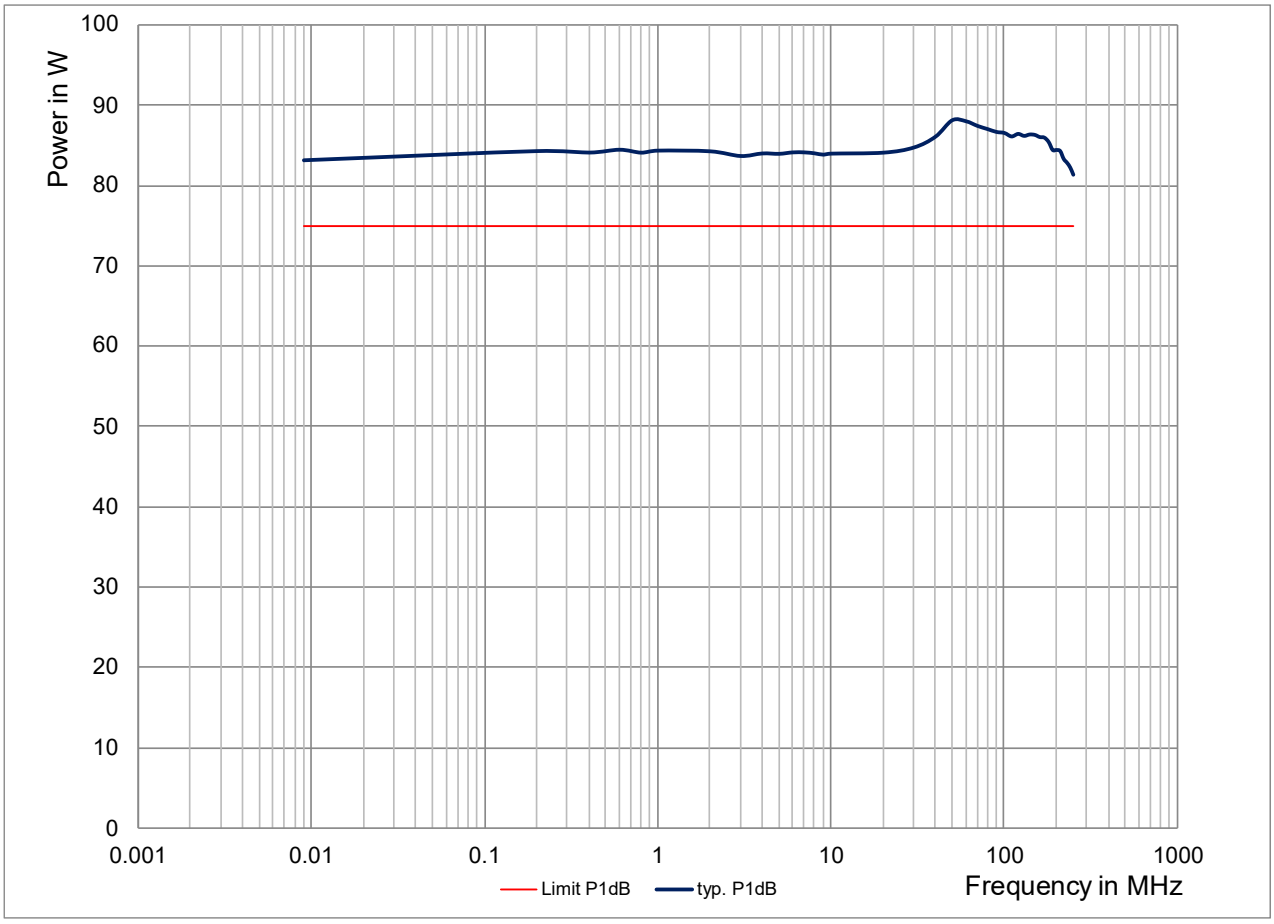
Non-traceable specifications with limits, typical data as well as nominal and measured values are not warranted by Rohde & Schwarz.

In line with the 3GPP standard, chip rates are specified in million chips per second (Mcps), whereas bit rates and symbol rates are specified in billion bit per second (Gbps), million bit per second (Mbps), thousand bit per second (kbps), million symbols per second (Msps) or thousand symbols per second (ksps), and sample rates are specified in million samples per second (Msample/s). Gbps, Mcps, Mbps, Msps, kbps, ksps and Msample/s are not SI units.

Frequency band A from 9 kHz to 250 MHz

R&S®BBA150-A75, power class: 75 W P1dB [1]

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		75 W (48.8 dBm)
Output power	9 kHz to 50 MHz	min. 75 W (48.8 dBm)
	50 MHz to 225 MHz	min. 90 W (49.6 dBm)
	225 MHz to 250 MHz	min. 75 W (48.8 dBm)
Output power at 1 dB compression		min. 75 W (48.8 dBm)
Nominal power gain	at 1 MHz	nom. 52.2 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 42.8 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at 75 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

[1] Only as a part of the R&S®BBA150-A75BC70 dual band amplifier and the R&S®BBA150-A75A75 twin band amplifier.

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 50 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

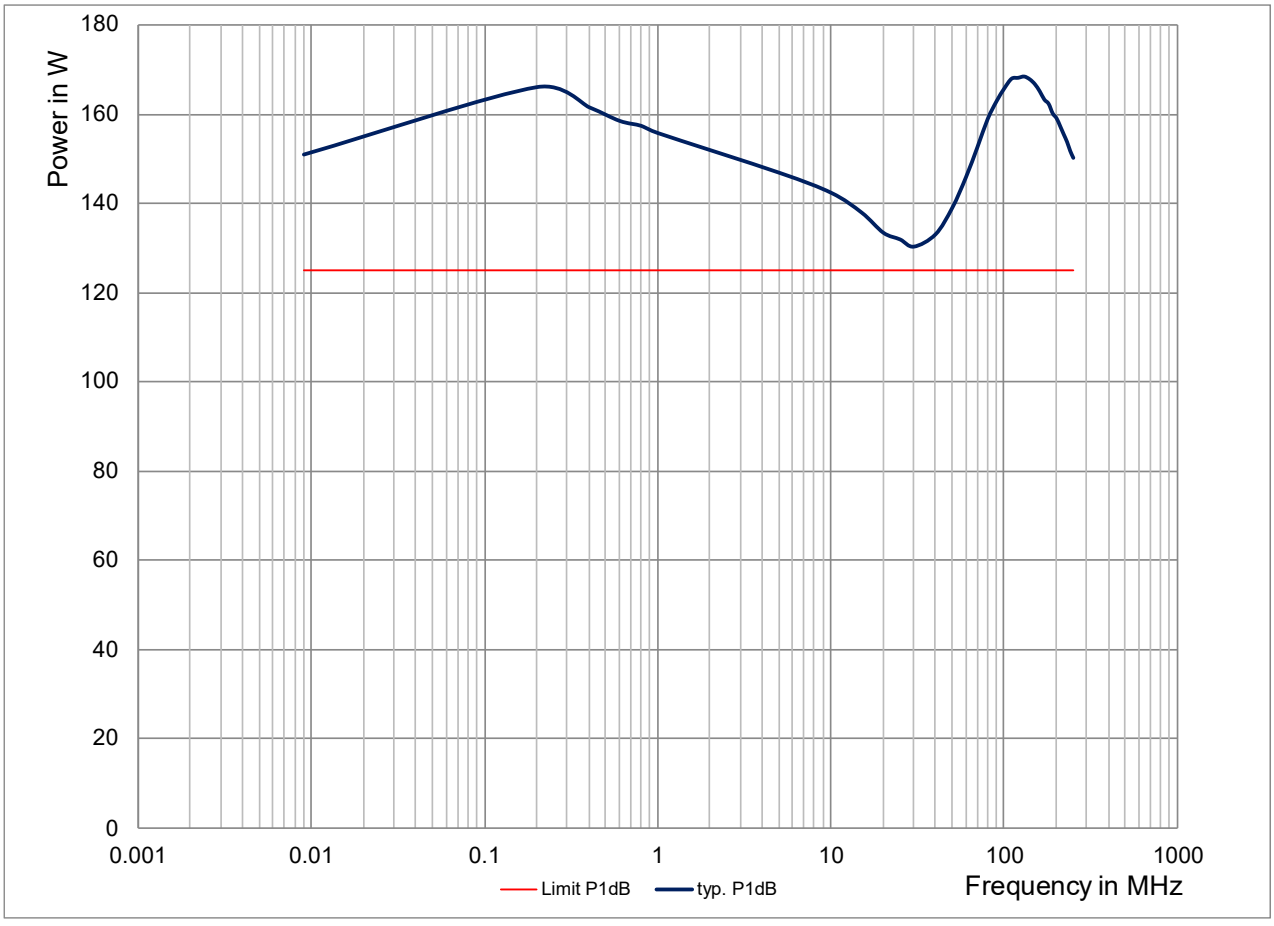
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [2]	at 110 V	9.1 A
	at 230 V	4.4 A
Rated power	RF_{cw} = 75 W (RMS), VSWR = 1	1.0 kVA

[2] The appropriate connection has to be provided on site.

R&S®BBA150-A125, power class: 125 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		125 W (51.0 dBm)
Output power	9 kHz to 50 MHz	min. 125 W (51.0 dBm)
	50 MHz to 225 MHz	min. 140 W (51.5 dBm)
	225 MHz to 250 MHz	min. 125 W (51.0 dBm)
Output power at 1 dB compression		min. 125 W (51.0 dBm)
Nominal power gain	at 1 MHz	nom. 54.4 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 45.0 dBm/tone, 100 kHz spacing	nom. < –33 dBc
Harmonics	at 125 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 50 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

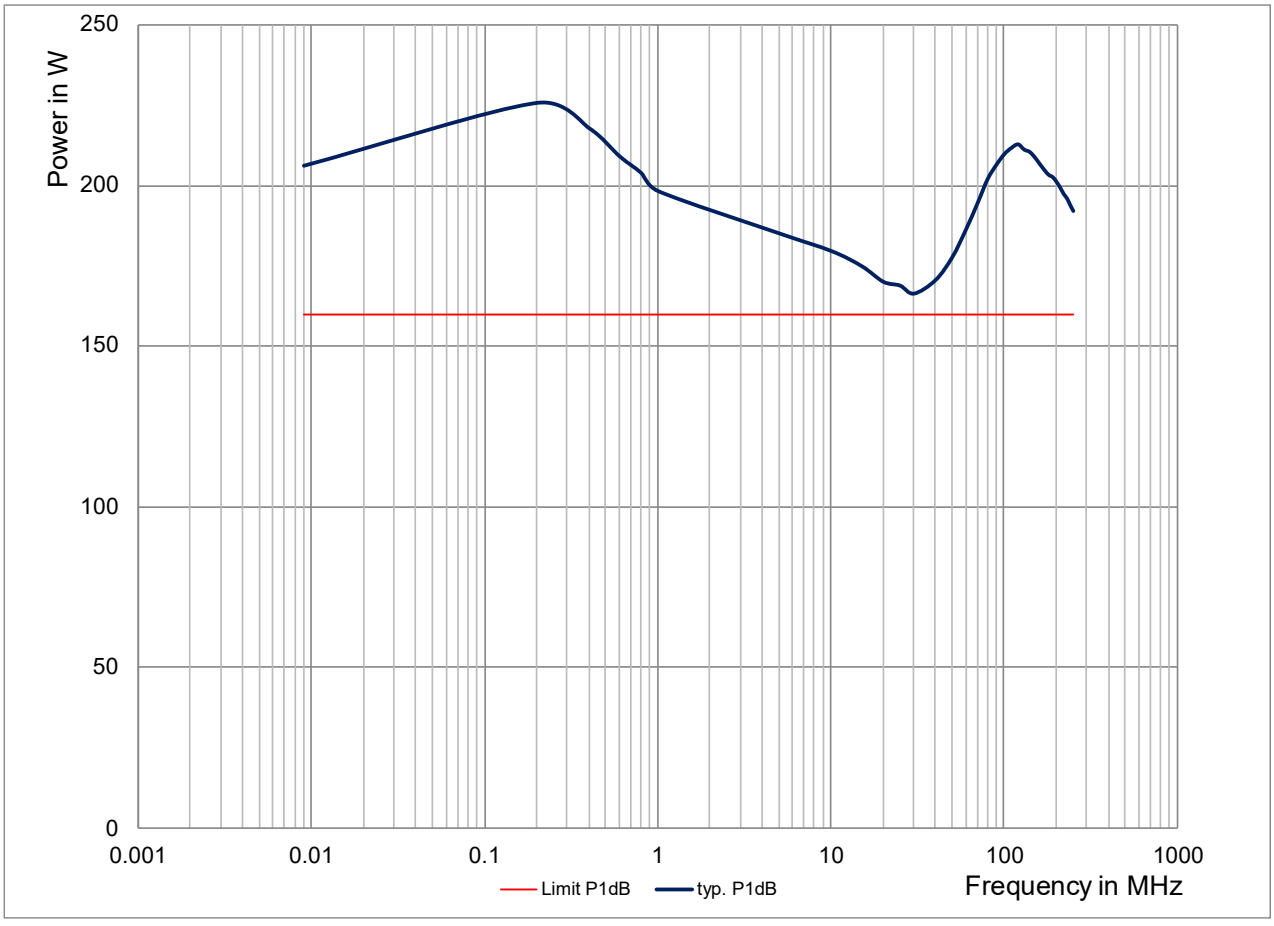
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [3]	at 110 V	9.1 A
	at 230 V	4.4 A
Rated power	RF_{cw} = 125 W (RMS), VSWR = 1	1.0 kVA

[3] The appropriate connection has to be provided on site.

R&S®BBA150-A160, power class: 160 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		160 W (52.0 dBm)
Output power	9 kHz to 50 MHz	min. 160 W (52.0 dBm)
	50 MHz to 225 MHz	min. 180 W (52.6 dBm)
	225 MHz to 250 MHz	min. 160 W (52.0 dBm)
Output power at 1 dB compression		min. 160 W (52.0 dBm)
Nominal power gain	at 1 MHz	nom. 55.4 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 46.0 dBm/tone, 100 kHz spacing	nom. < –31.2 dBc
Harmonics	at 160 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 50 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

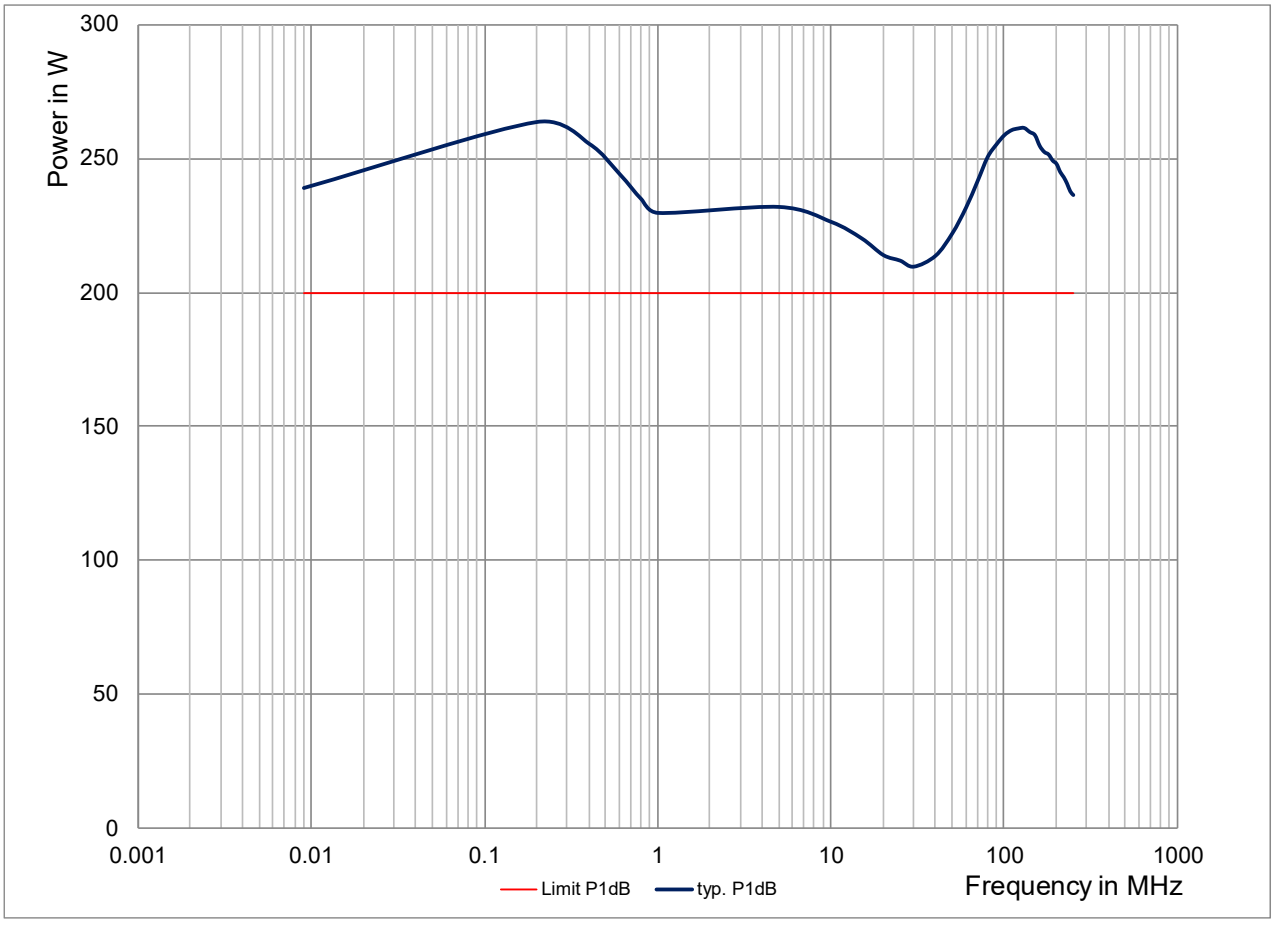
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [4]	at 110 V	9.1 A
	at 230 V	4.4 A
Rated power	RF_{cw} = 160 W (RMS), VSWR = 1	1.0 kVA

[4] The appropriate connection has to be provided on site.

R&S®BBA150-A200, power class: 200 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		200 W (53.0 dBm)
Output power	9 kHz to 50 MHz	min. 200 W (53.0 dBm)
	50 MHz to 225 MHz	min. 230 W (53.6 dBm)
	225 MHz to 250 MHz	min. 200 W (53.0 dBm)
Output power at 1 dB compression		min. 200 W (53.0 dBm)
Nominal power gain	at 1 MHz	nom. 56.4 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 47.0 dBm/tone, 100 kHz spacing	nom. < –28.1 dBc
Harmonics	at 200 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 50 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

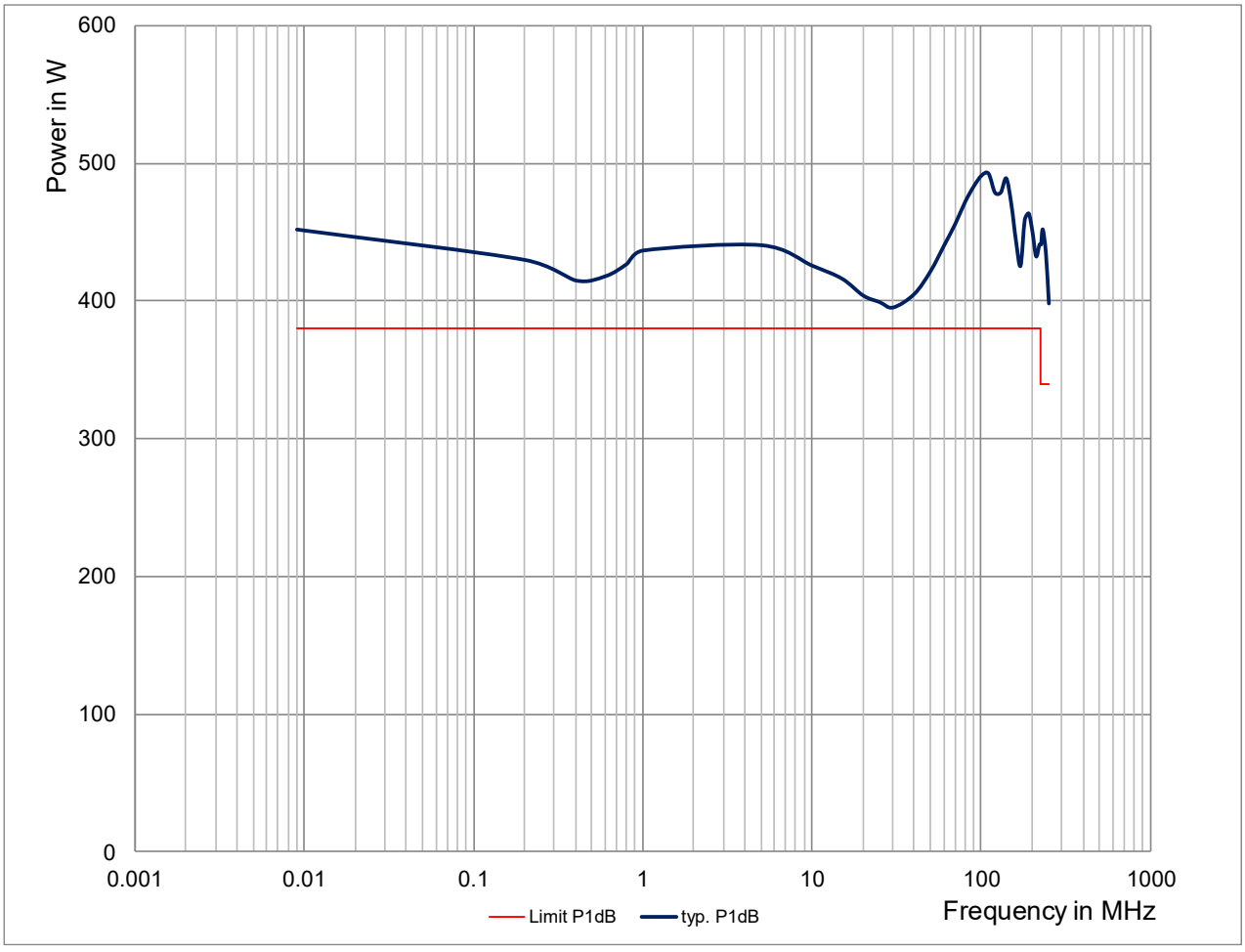
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [5]	at 110 V	9.1 A
	at 230 V	4.4 A
Rated power	RF_{cw} = 200 W (RMS), VSWR = 1	1.0 kVA

[5] The appropriate connection has to be provided on site.

R&S®BBA150-A400, power class: 400 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		400 W (56.0 dBm)
Output power	9 kHz to 50 MHz	min. 385 W (55.9 dBm)
	50 MHz to 225 MHz	min. 400 W (56.0 dBm)
	225 MHz to 250 MHz	min. 385 W (55.9 dBm)
Power output at 1 dB compression	9 kHz to 225 MHz	min. 380 W (55.8 dBm)
	225 MHz to 250 MHz	min. 340 W (55.3 dBm)
Nominal power gain	at 1 MHz	nom. 59 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 49.3 dBm/tone, 100 kHz spacing	nom. < –27.2 dBc
Harmonics	at 380 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 50 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 24 kg (53 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

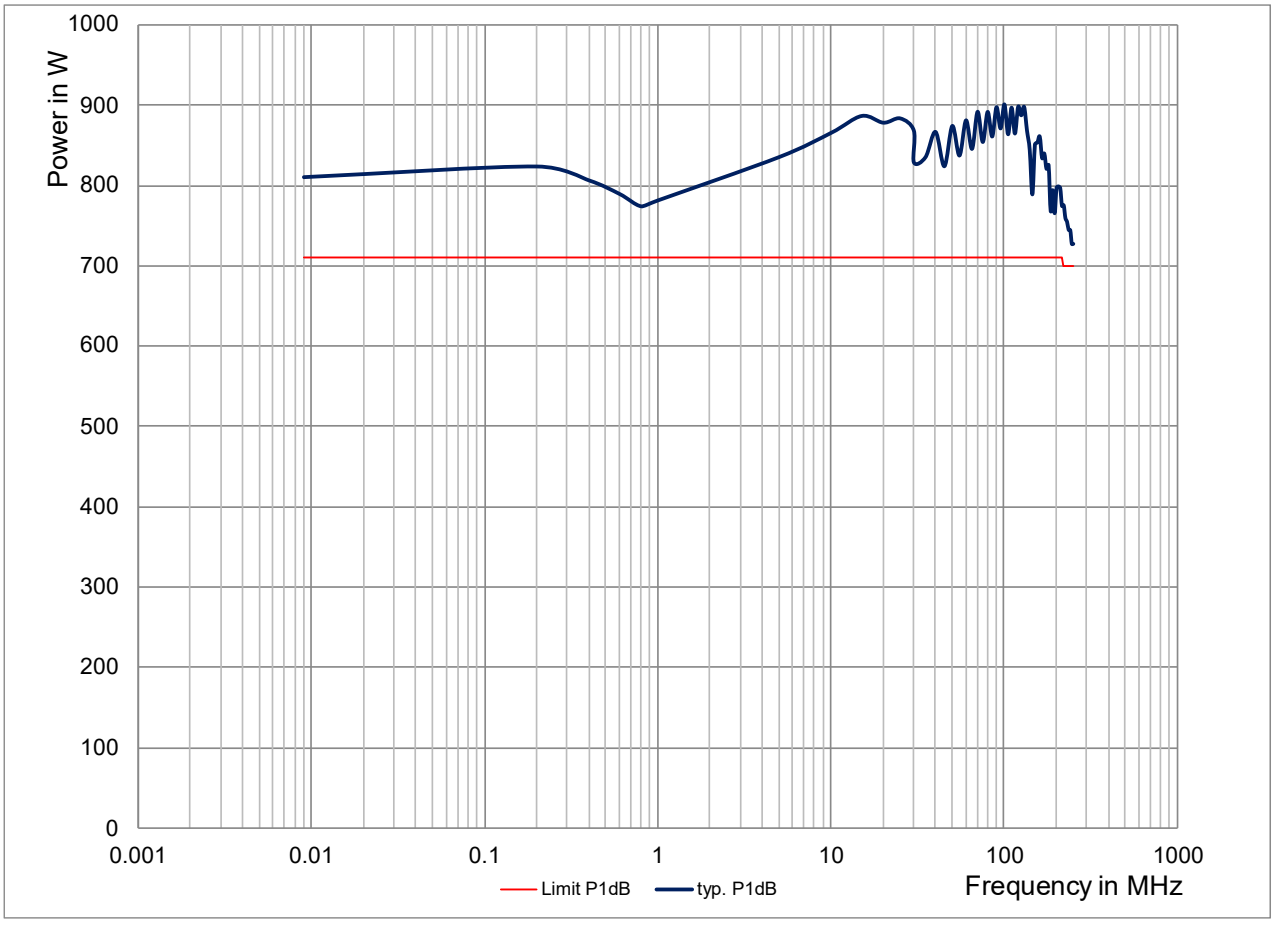
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [6]	at 200 V	10.0 A
	at 230 V	8.7 A
Rated power	RF_{cw} = 400 W (RMS), VSWR = 1	2.0 kVA

[6] The appropriate connection has to be provided on site.

R&S®BBA150-A700, power class: 700 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		700 W (58.4 dBm)
Output power	9 kHz to 20 MHz	min. 710 W (58.5 dBm)
	20 MHz to 220 MHz	min. 800 W (59.0 dBm)
	220 MHz to 250 MHz	min. 710 W (58.5 dBm)
Power output at 1 dB compression	9 kHz to 220 MHz	min. 710 W (58.5 dBm)
	220 MHz to 250 MHz	min. 700 W (58.4 dBm)
Nominal power gain	at 1 MHz	nom. 62 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 52.5 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at 700 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 64 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D	19" rack, 12 HU, depth: 800 mm (31.5 in)
Weight		approx. 120 kg (265 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	$^{7}/_{16}$ DIN female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

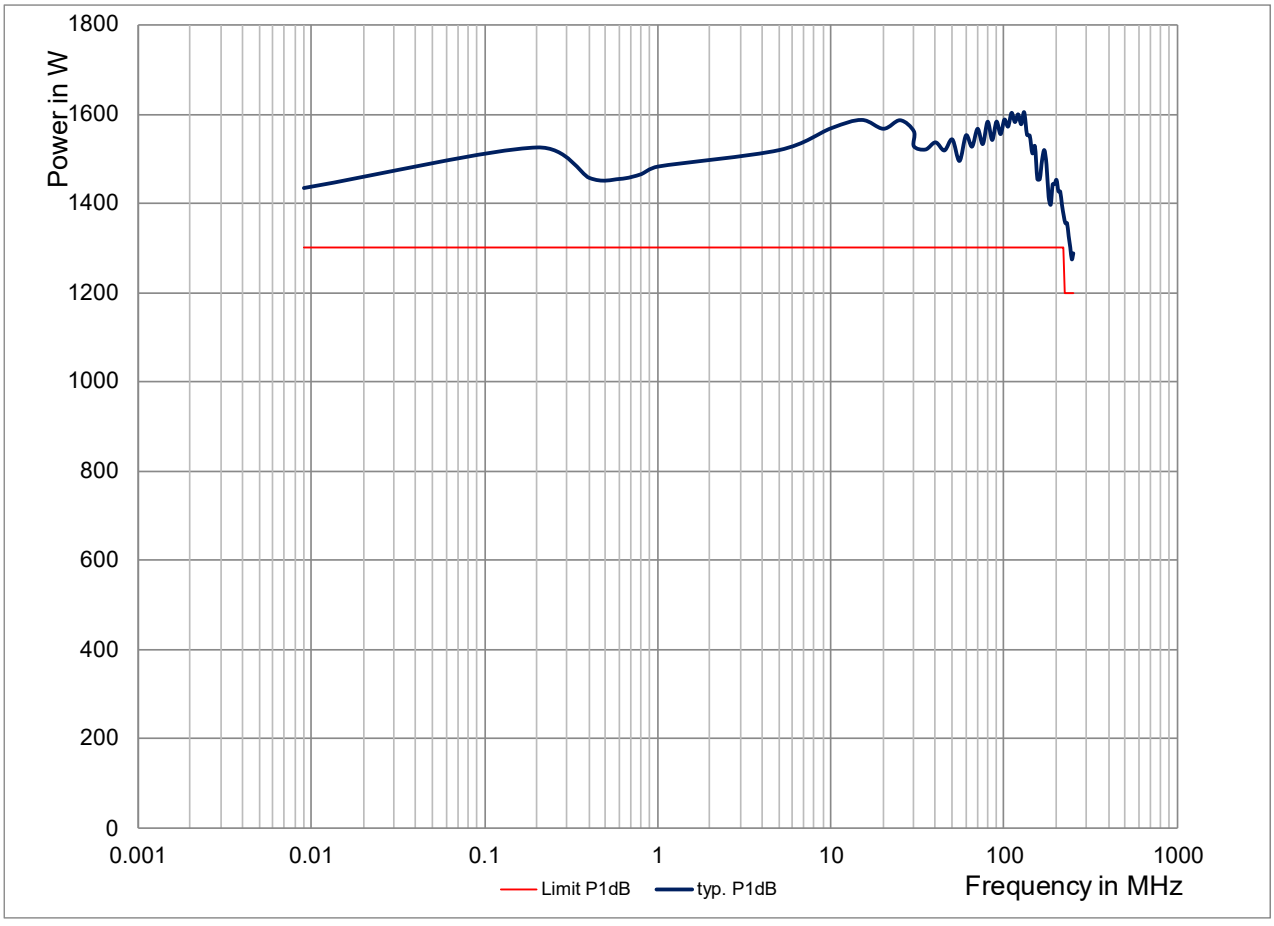
Electrical specifications

AC supply voltage		
Nominal operating voltage range		208 V to 240 V AC ± 10 %, single phase 47 Hz to 63 Hz
		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		208 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [7]		max. 16 A
Rated power	RF_{cw} = 700 W (RMS), VSWR = 1	3.6 kVA

[7] The appropriate connection has to be provided on site.

R&S®BBA150-A1300, power class: 1300 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		1300 W (61.1 dBm)
Output power	9 kHz to 20 MHz	min. 1300 W (61.1 dBm)
	20 MHz to 220 MHz	min. 1400 W (61.5 dBm)
	220 MHz to 250 MHz	min. 1300 W (61.1 dBm)
Output power at 1 dB compression	9 kHz to 220 MHz	min. 1300 W (61.1 dBm)
	220 MHz to 250 MHz	min. 1200 W (60.8 dBm)
Nominal power gain	at 1 MHz	nom. 64.5 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 54.8 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at 1300 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 65 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 20 HU, depth: 1000 mm (39.4 in)
Weight	amplifier system incl. rack	approx. 200 kg (441 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	1 $^{5}/_{8}$" EIA male
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

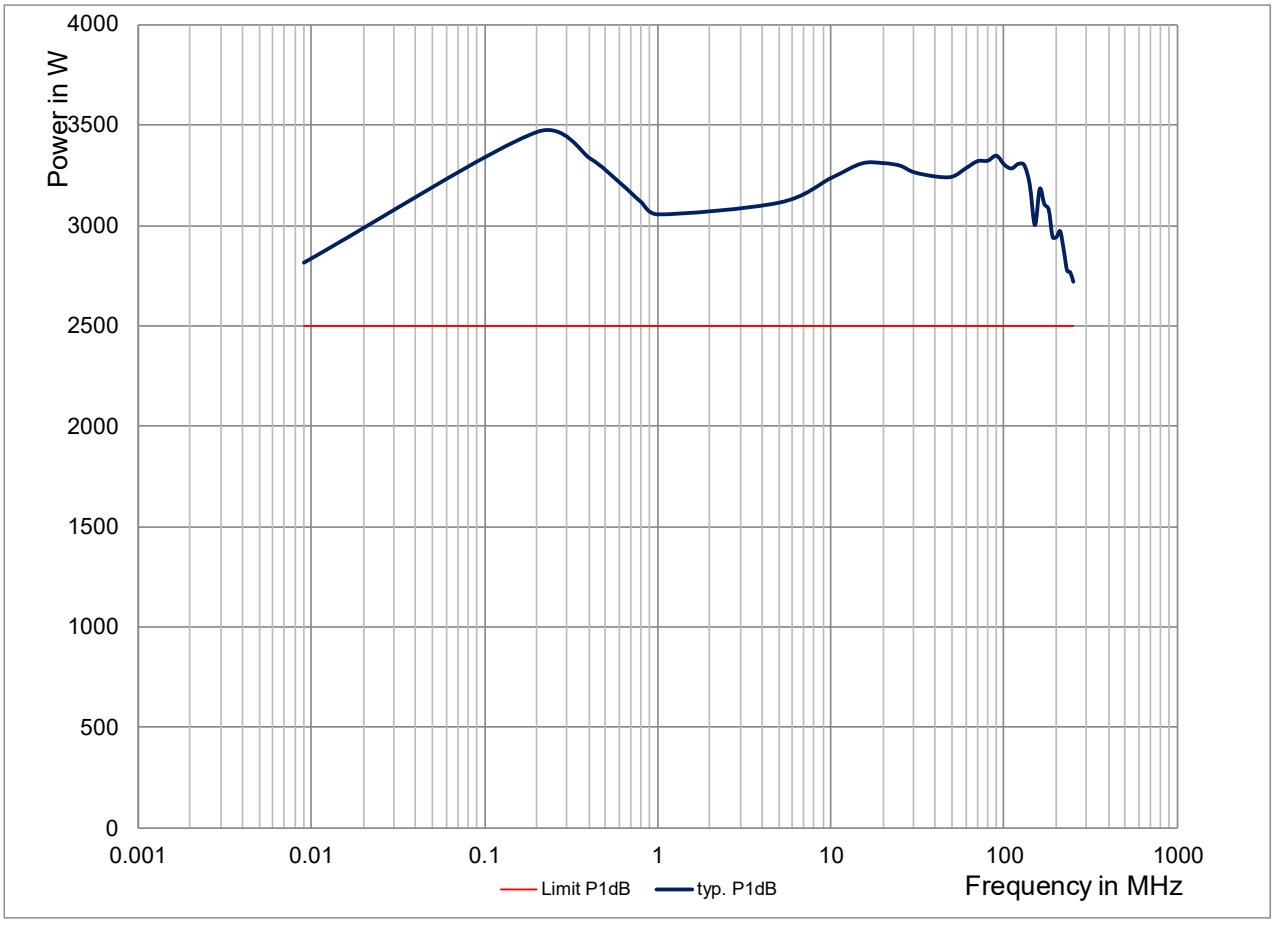
Electrical specifications

AC supply voltage		
Nominal operating voltage range		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		208 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [8]	at 230 V per phase	15.2/15.2/0.5 A
Rated power	RF_{cw} = 1300 W (RMS), VSWR = 1	7 kVA

[8] The appropriate connection has to be provided on site.

R&S®BBA150-A2500, power class: 2500 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		2500 W (64.0 dBm)
Output power	9 kHz to 200 kHz	min. 2500 W (64.0 dBm)
	200 kHz to 220 MHz	min. 3000 W (64.8 dBm)
	220 MHz to 250 MHz	min. 2500 W (64.0 dBm)
Output power at 1 dB compression	9 kHz to 200 kHz	min. 2500 W (64.0 dBm)
	200 kHz to 120 MHz	min. 2800 W (64.5 dBm)
	120 MHz to 250 MHz	min. 2500 W (64.0 dBm)
Nominal power gain	at 1 MHz	nom. 67.4 dB
Gain flatness		< ±2.8 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 58.0 dBm/tone, 100 kHz spacing	nom. < –26.2 dBc
Harmonics	at 2500 W	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1 MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 50 MHz	nom. < 16.0 dB
	50 MHz to 250 MHz	nom. < 9.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 54 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 35 HU, depth: 800 mm (31.5 in)
Weight	amplifier system incl. rack	approx. 315 kg (694 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	1 $^{5}/_{8}$" EIA male
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

Electrical specifications

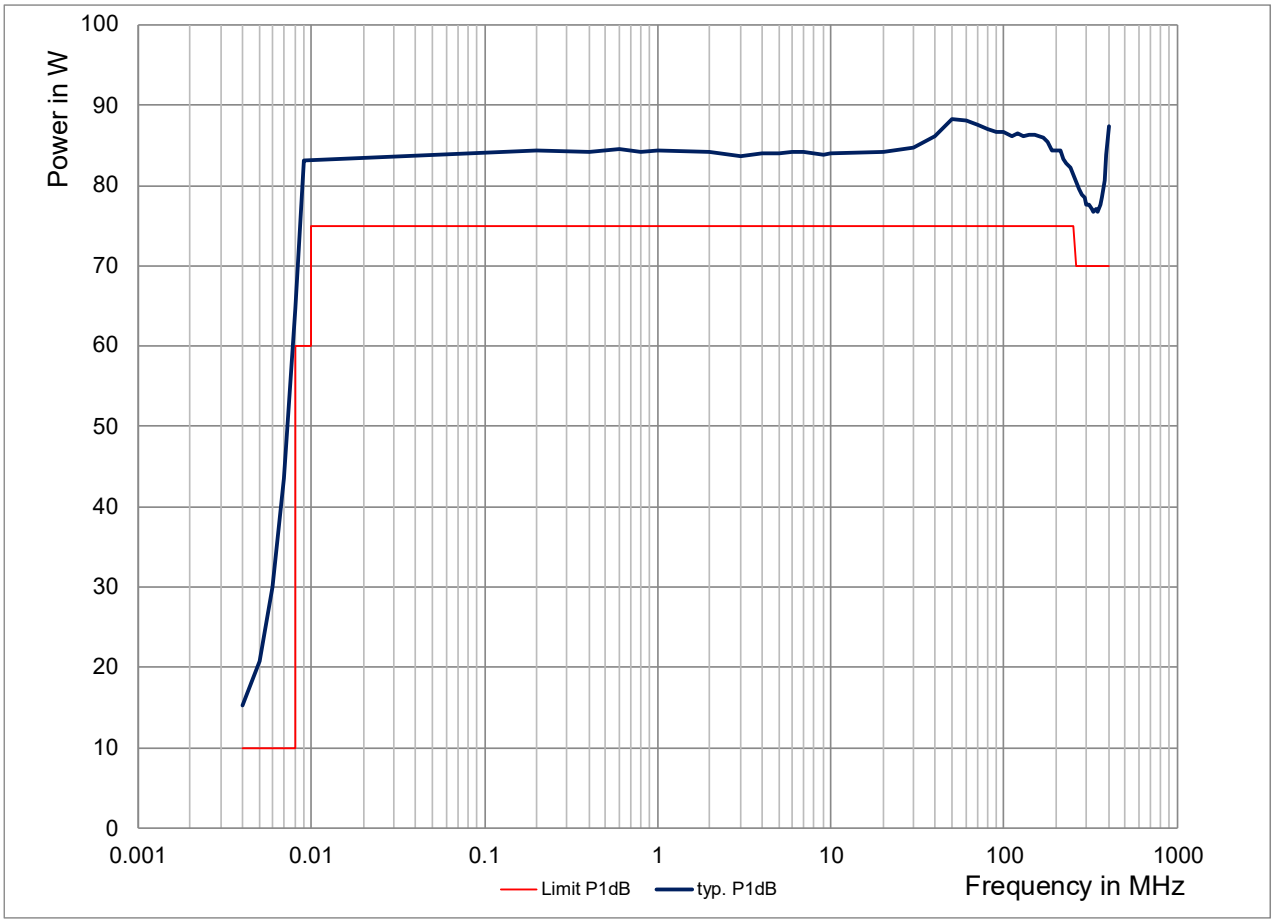
AC supply voltage		
Nominal operating voltage range		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		208 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [9]	at 230 V per phase	28.3 A/14.1 A/14.1 A
Rated power	RF_{cw} = 2500 W (RMS), VSWR = 1	13.0 kVA

[9] The appropriate connection has to be provided on site.

Frequency band AB from 4 kHz to 400 MHz

R&S®BBA150-AB75, power class: 75 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		4 kHz to 400 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		75 W (48.7 dBm)
Output power	4 kHz to 8 kHz	min. 10 W (40.0 dBm) at 4 kHz, rising to 60 W (46.8 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 60 W (47.8 dBm)
	10 kHz to 250 MHz	min. 80 W (49.0 dBm)
	250 MHz to 400 MHz	min. 75 W (48.7 dBm)
Output power at 1 dB compression	4 kHz to 8 kHz	min. 10 W (40.0 dBm) at 4 kHz, rising to 60 W (47.8 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 60 W (47.8 dBm)
	10 kHz to 250 MHz	min. 75 W (48.7 dBm)
	250 MHz to 400 MHz	min. 70 W (48.5 dBm)
Nominal power gain	at 150 MHz	nom. 52.1 dB
Gain flatness	8 kHz to 400 MHz	< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 52.5 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at output power	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 400 MHz	nom. < 16.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 45 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

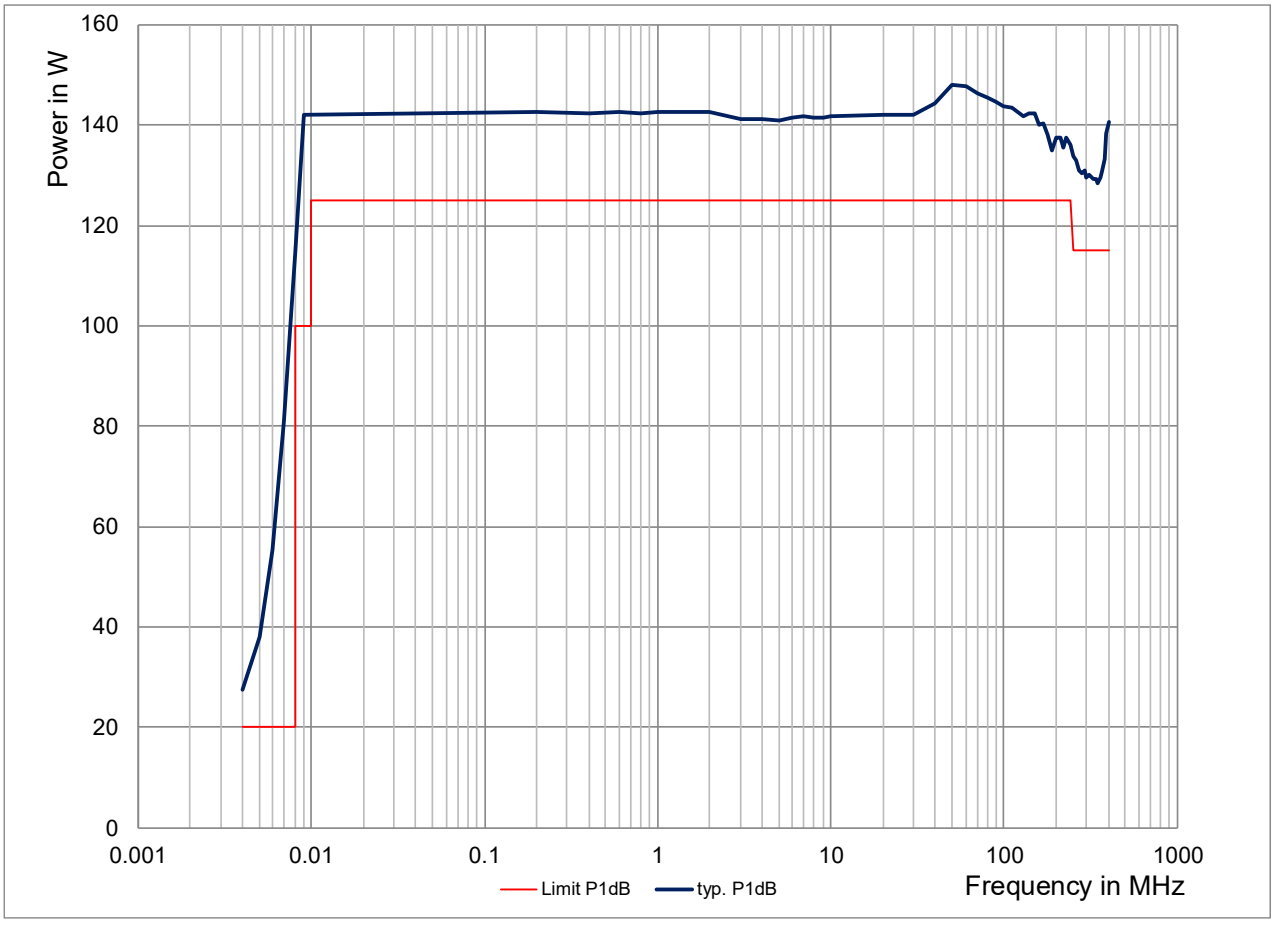
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [10]	at 110 V	10.0 A
	at 230 V	4.8 A
Rated power	RF_{cw} = 75 W RMS, VSWR = 1	1.1 kVA

[10] The appropriate connection has to be provided on site.

R&S®BBA150-AB125, power class: 125 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		4 kHz to 400 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		125 W (51.0 dBm)
Output power	4 kHz to 8 kHz	min. 20 W (43.0 dBm) at 4 kHz, rising to 100 W (50.0 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 100 W (50.0 dBm)
	10 kHz to 250 MHz	min. 135 W (51.3 dBm)
	250 MHz to 400 MHz	min. 125 W (51.0 dBm)
Output power at 1 dB compression	4 kHz to 8 kHz	min. 20 W (43.0 dBm) at 4 kHz, rising to 100 W (50.0 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 100 W (50.0 dBm)
	10 kHz to 250 MHz	min. 125 W (51.0 dBm)
	250 MHz to 400 MHz	min. 115 W (50.6 dBm)
Nominal power gain	at 150 MHz	nom. 54.4 dB
Gain flatness	8 kHz to 400 MHz	< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 52.5 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at output power	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 400 MHz	nom. < 16.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 45 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

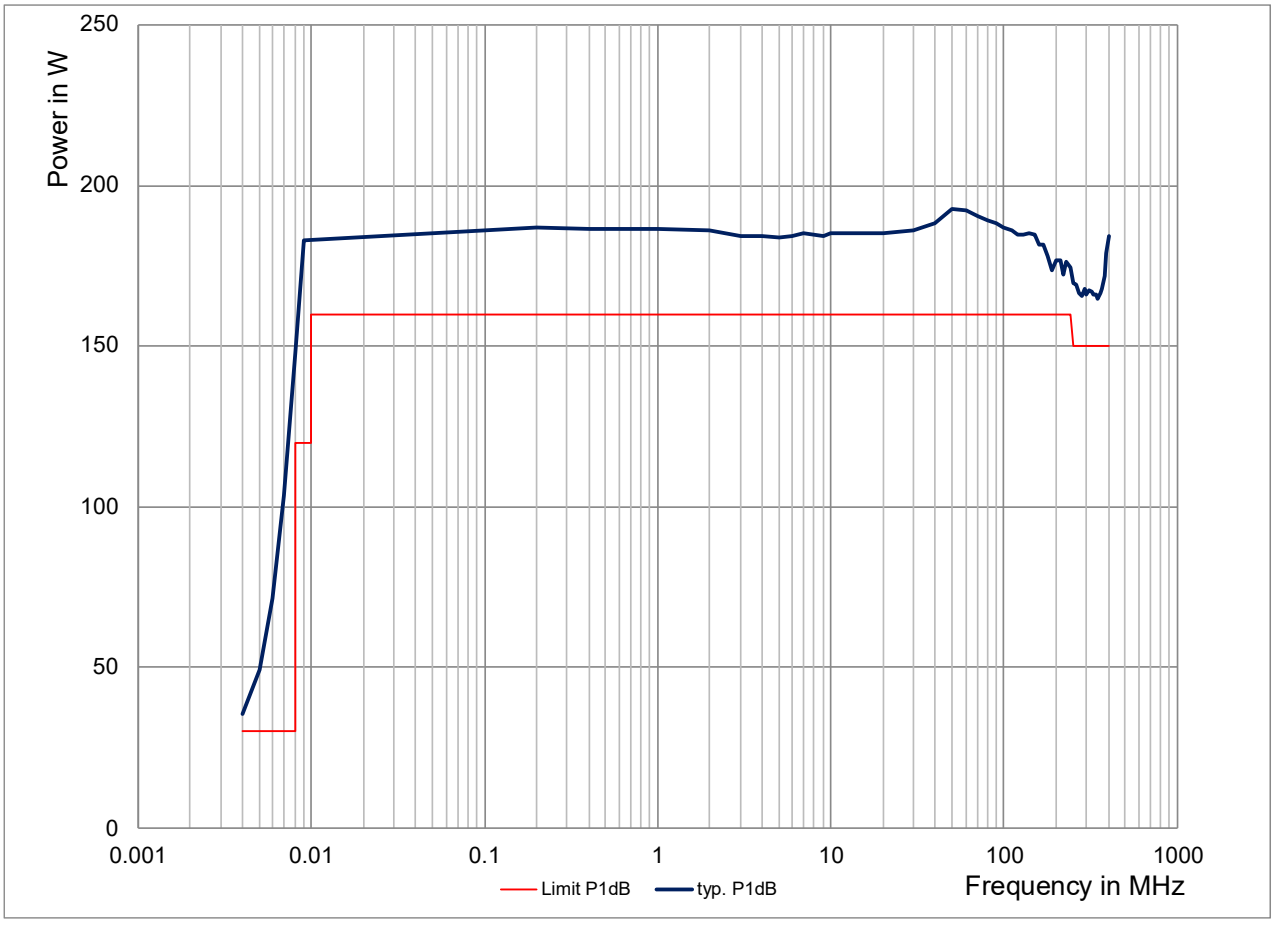
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [11]	at 110 V	10.0 A
	at 230 V	4.8 A
Rated power	RF_{cw} = 125 W RMS, VSWR = 1	1.1 kVA

[11] The appropriate connection has to be provided on site.

R&S®BBA150-AB160, power class: 160 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		4 kHz to 400 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		160 W (52.0 dBm)
Output power	4 kHz to 8 kHz	min. 30 W (44.8 dBm) at 4 kHz, rising to 120 W (50.8 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 120 W (50.8 dBm)
	10 kHz to 250 MHz	min. 170 W (52.3 dBm)
	250 MHz to 400 MHz	min. 160 W (52.0 dBm)
Output power at 1 dB compression	4 kHz to 8 kHz	min. 30 W (44.8 dBm) at 4 kHz, rising to 120 W (50.8 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 120 W (50.8 dBm)
	10 kHz to 250 MHz	min. 160 W (52.0 dBm)
	250 MHz to 400 MHz	min. 150 W (51.8 dBm)
Nominal power gain	at 150 MHz	nom. 55.4 dB
Gain flatness	8 kHz to 400 MHz	< ±3 dB
Gain adjustment range		> 15 dB
Harmonics	at output power	< –20 dBc
Spurious	carrier offset > 100 kHz, from 1MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 400 MHz	nom. < 16.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 45 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

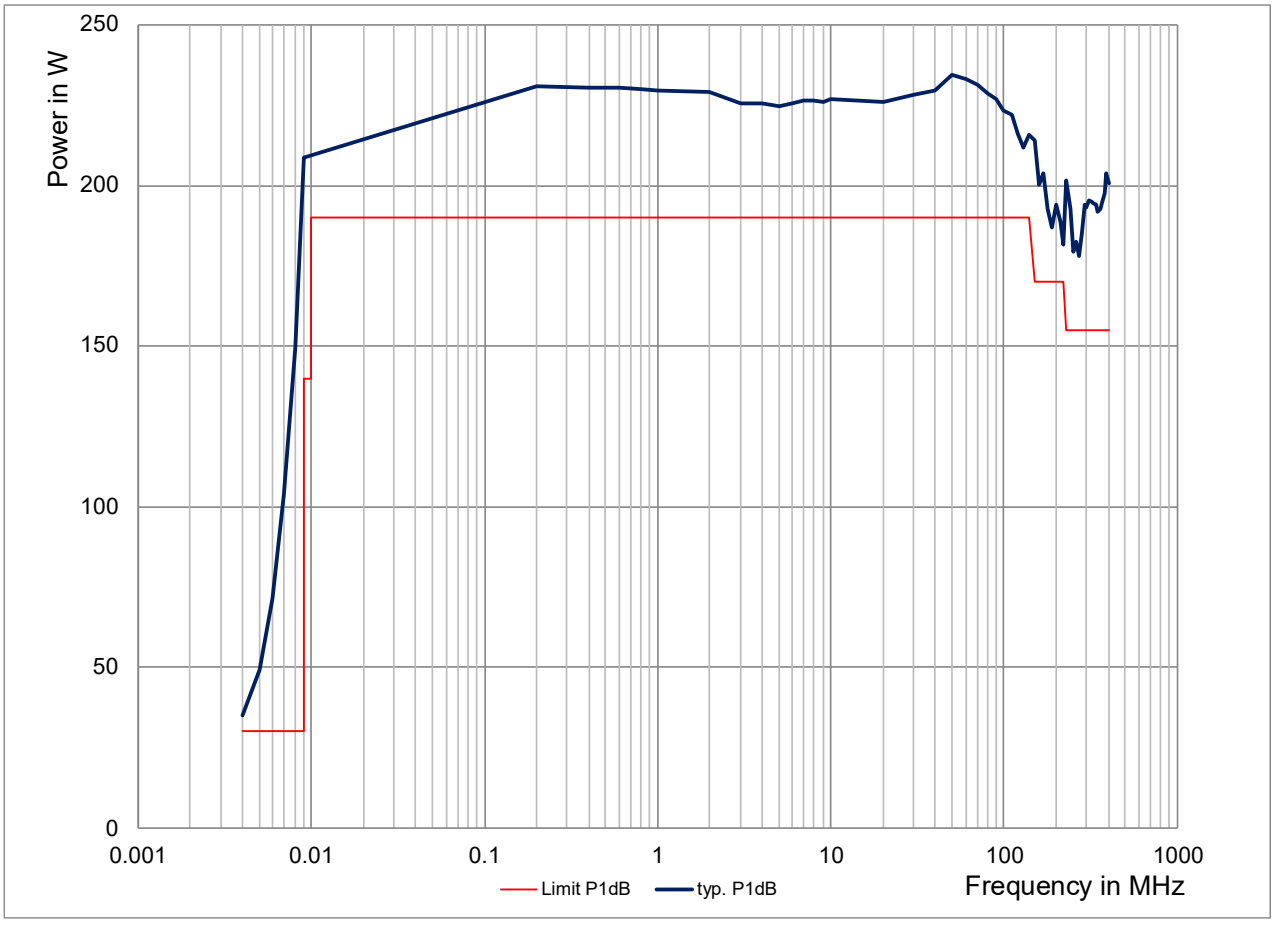
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [12]	at 110 V	10.0 A
	at 230 V	4.8 A
Rated power	RF_{cw} = 160 W RMS, VSWR = 1	1.1 kVA

[12] The appropriate connection has to be provided on site.

R&S®BBA150-AB200, power class: 200 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		4 kHz to 400 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		200 W (53.0 dBm)
Output power	4 kHz to 9 kHz	min. 35 W (45.4 dBm) at 4 kHz, rising to 140 W (51.5 dBm) at 9 kHz
	9 kHz to 10 kHz	min. 140 W (51.5 dBm)
	10 kHz to 230 MHz	min. 210 W (53.3 dBm)
	230 MHz to 400 MHz	min. 160 W (52.0 dBm)
Output power at 1 dB compression	4 kHz to 9 kHz	min. 30 W (44.8 dBm) at 4 kHz, rising to 140 W (51.5 dBm) at 9 kHz
	9 kHz to 10 kHz	min. 140 W (51.5 dBm)
	10 kHz to 150 MHz	min. 190 W (52.8 dBm)
	150 MHz to 230 MHz	min. 170 W (52.3 dBm)
	230 MHz to 400 MHz	min. 155 W (51.9 dBm)
Nominal power gain	at 150 MHz	nom. 56 dB
Gain flatness	8 kHz to 400 MHz	< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 52.5 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at output power	< –17 dBc
Spurious	carrier offset > 100 kHz, from 1MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	5 MHz to 400 MHz	nom. < 16.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 45 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

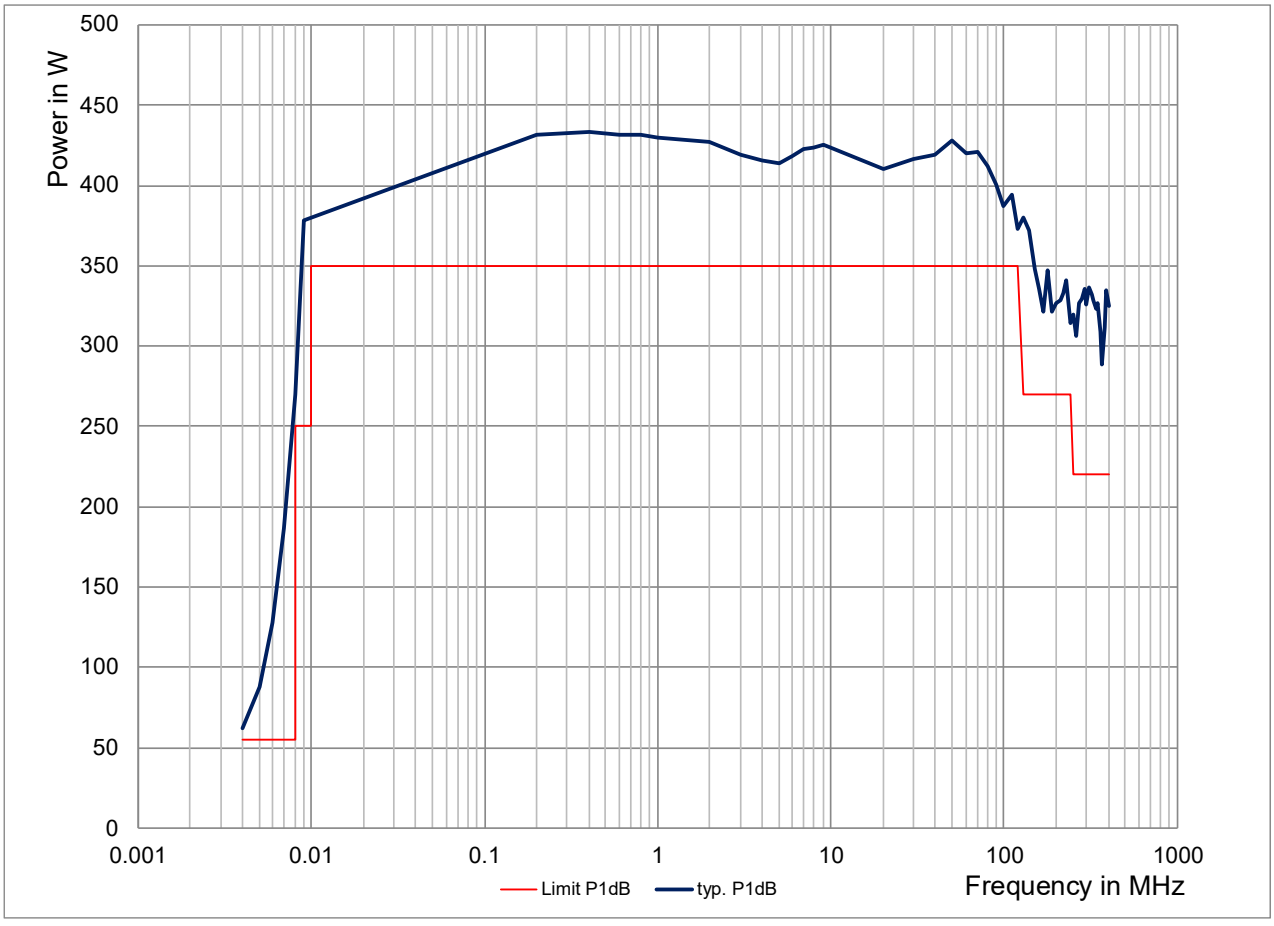
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [13]	at 110 V	10.0 A
	at 230 V	4.8 A
Rated power	RF_{cw} = 200 W RMS, VSWR = 1	1.1 kVA

[13] The appropriate connection has to be provided on site.

R&S®BBA150-AB350, power class: 350 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		4 kHz to 400 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		350 W (55.5 dBm)
Output power	4 kHz to 8 kHz	min. 60 W (47.8 dBm) at 4 kHz, rising to 250 W (54.0 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 250 W (54.0 dBm)
	10 kHz to 250 MHz	min. 350 W (55.5 dBm)
	250 MHz to 400 MHz	min. 300 W (54.8 dBm)
Power output at 1 dB compression	4 kHz to 8 kHz	min. 55 W (47.4 dBm)) at 4 kHz, rising to 250 W (54.0 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 250 W (54.0 dBm)
	10 kHz to 130 MHz	min. 350 W (55.5 dBm)
	130 MHz to 250 MHz	min. 270 W (54.3 dBm)
	250 MHz to 400 MHz	min. 220 W (53.4 dBm)
Nominal power gain	at 150 MHz	nom. 58.9 dB
Gain flatness	8 kHz to 400 MHz	< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 52.5 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at output power	< –17 dBc
Spurious	carrier offset > 100 kHz, from 1MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	10 MHz to 400 MHz	nom. < 16.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 48 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 24 kg (53 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

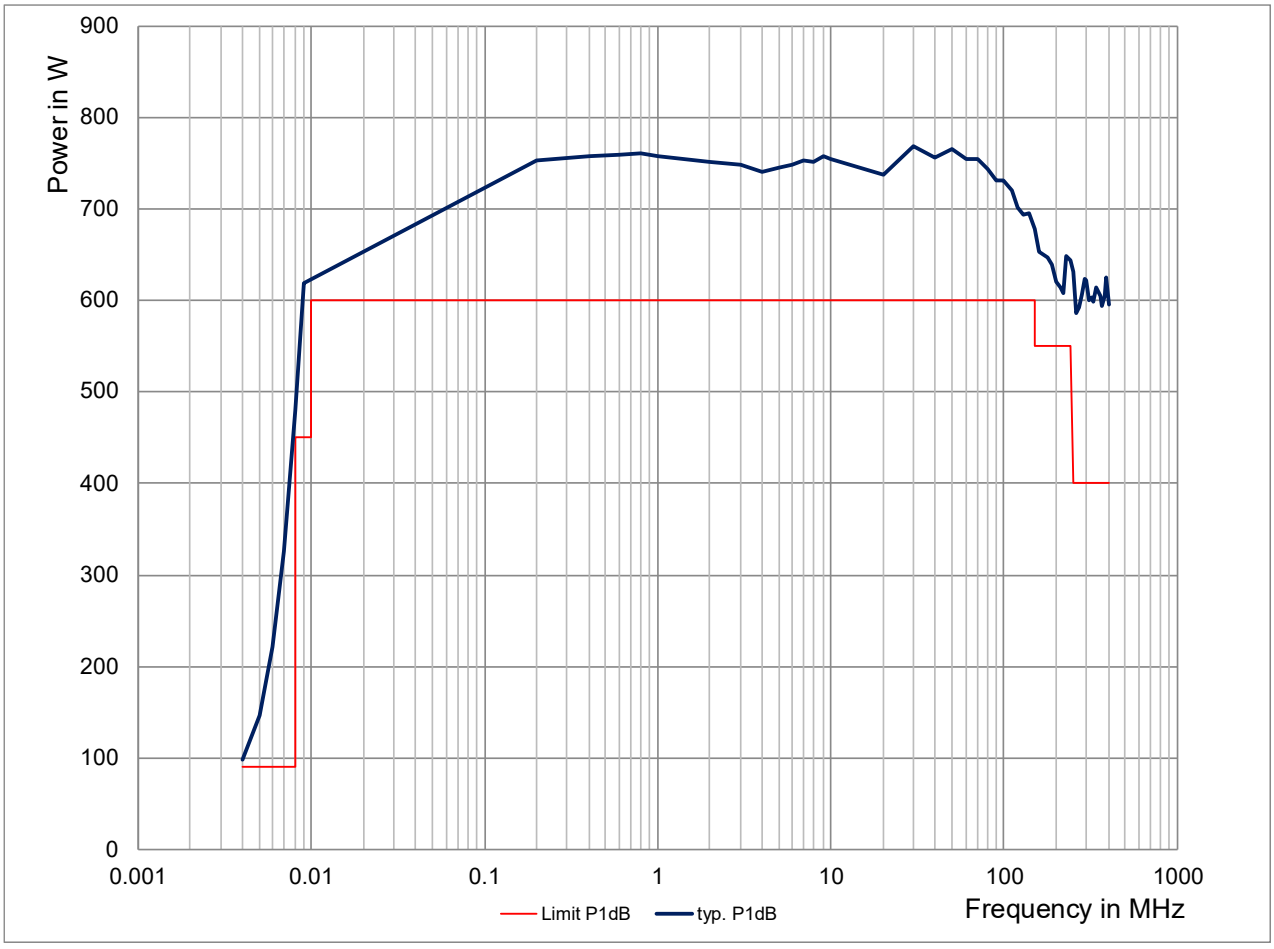
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [14]	at 200 V	10.0 A
	at 230 V	8.7 A
Rated power	RF_{cw} = 350 W RMS, VSWR = 1	2.0 kVA

[14] The appropriate connection has to be provided on site.

R&S®BBA150-AB600, power class: 600 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		4 kHz to 400 MHz instantaneously
Nominal output load		50 Ω
Nominal output power		600 W (57.8 dBm)
Output power	4 kHz to 8 kHz	min. 100 W (50 dBm) at 4 kHz, rising to 450 W (56.5 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 450 W (56.5 dBm)
	10 kHz to 250 MHz	min. 630 W (58.0 dBm)
	250 MHz to 400 MHz	min. 420 W (56.2 dBm)
Power output at 1 dB compression	4 kHz to 8 kHz	min. 90 W (49.5 dBm) at 4 kHz, rising to 450 W (56.5 dBm) at 8 kHz
	8 kHz to 10 kHz	min. 450 W (56.5 dBm)
	10 kHz to 150 MHz	min. 600 W (57.8 dBm)
	150 MHz to 250 MHz	min. 550 W (57.4 dBm)
	250 MHz to 400 MHz	min. 400 W (56.0 dBm)
Nominal power gain	at 150 MHz	nom. 61.2 dB
Gain flatness	8 kHz to 400 MHz	< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 52.5 dBm/tone, 100 kHz spacing	nom. < –20 dBc
Harmonics	at output power	< –17 dBc
Spurious	carrier offset > 100 kHz, from 1MHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain	20 MHz to 400 MHz	nom. < 16.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+5 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 51 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D	19" rack, 12 HU, depth: 800 mm (31.5 in)
Weight		approx. 120 kg (265 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	$^{7}/_{16}$ DIN female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

Electrical specifications

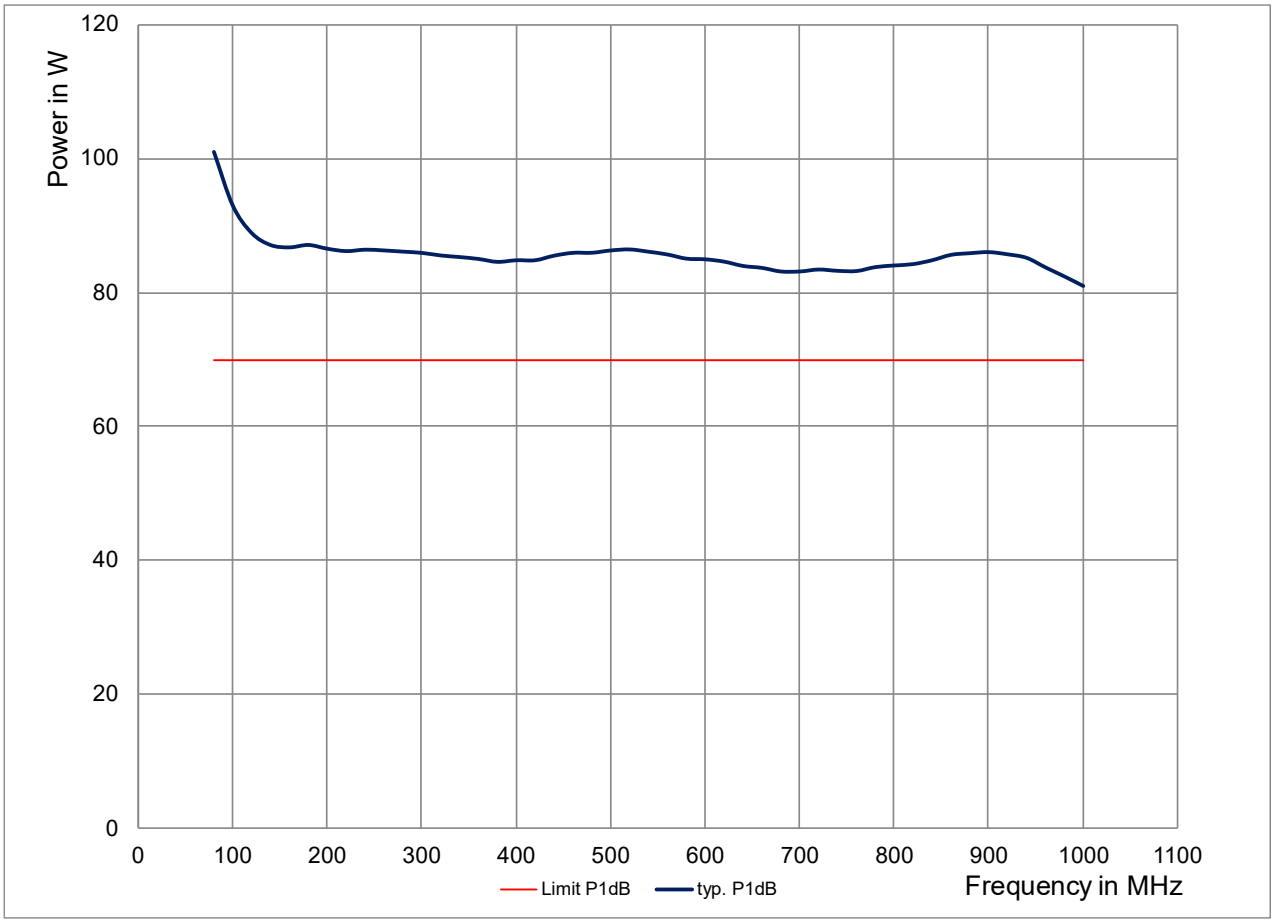
AC supply voltage		
Nominal operating voltage range		208 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		208 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [15]		max. 16 A
Rated power	RF_{cw} = 600 W (RMS), VSWR = 1	3.6 kVA

[15] The appropriate connection has to be provided on site.

Frequency band BC from 80 MHz to 1 GHz

R&S®BBA150-BC70, power class: 70 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		70 W (48.5 dBm)
Output power		min. 80 W (49.0 dBm)
Output power at 1 dB compression		min. 70 W (48.5 dBm)
Nominal power gain	at 400 MHz	nom. 51.9 dB
Gain flatness		< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 42.5 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 70 W	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –65 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 57 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

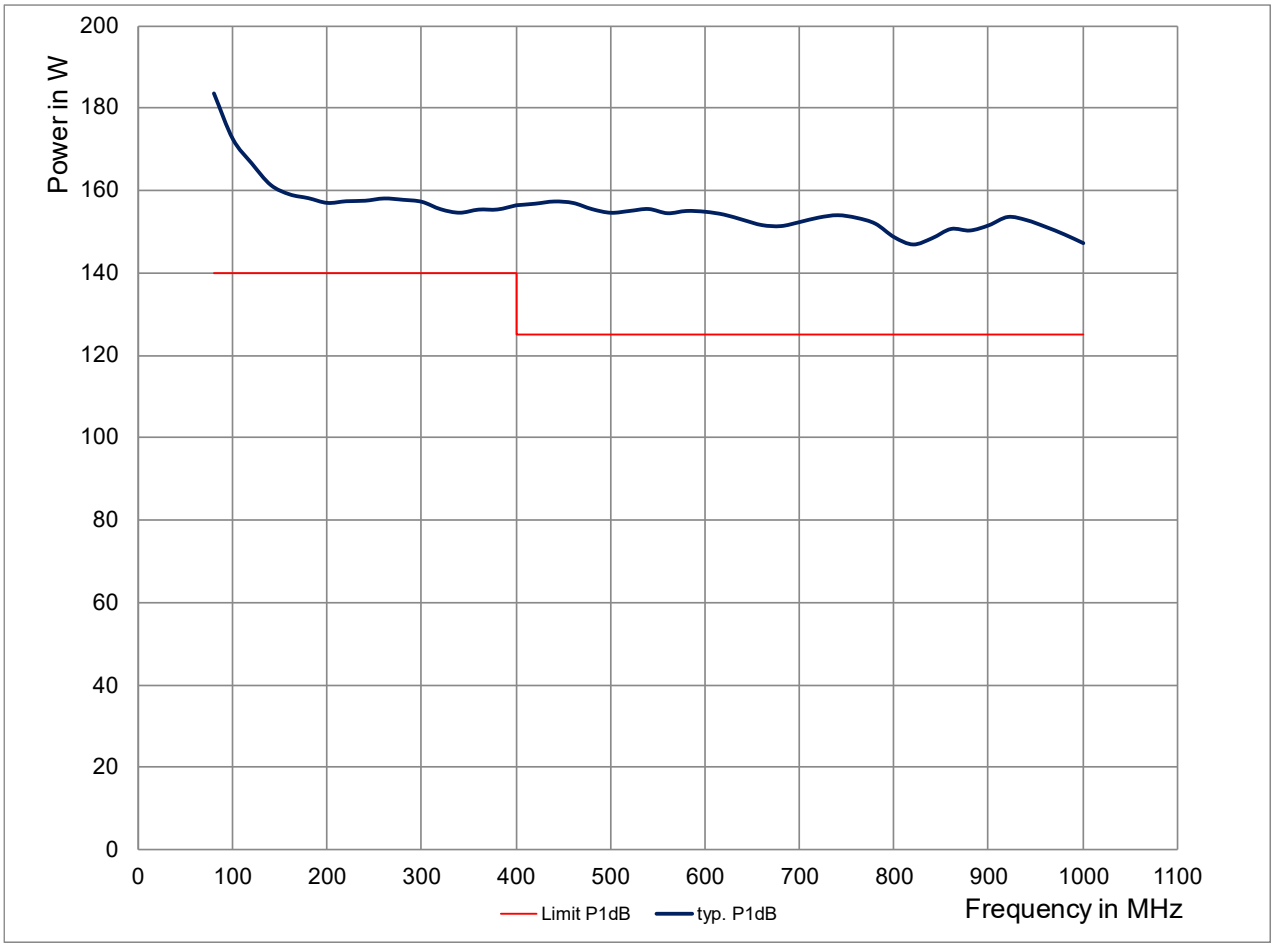
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [16]	at 110 V	7.7 A
	at 230 V	3.7 A
Rated power	RF_{cw} = 70 W (RMS), VSWR = 1	850 VA

[16] The appropriate connection has to be provided on site.

R&S®BBA150-BC125, power class: 125 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		125 W (51.0 dBm)
Output power	< 400 MHz	min. 150 W (51.8 dBm)
	> 400 MHz	min. 135 W (51.3 dBm)
Output power at 1 dB compression	< 400 MHz	min. 140 W (51.5 dBm)
	> 400 MHz	min. 125 W (51.0 dBm)
Nominal power gain	at 400 MHz	nom. 54.4 dB
Gain flatness		< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 45.0 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 125 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 125 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –65 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 57 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 16 kg (35 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

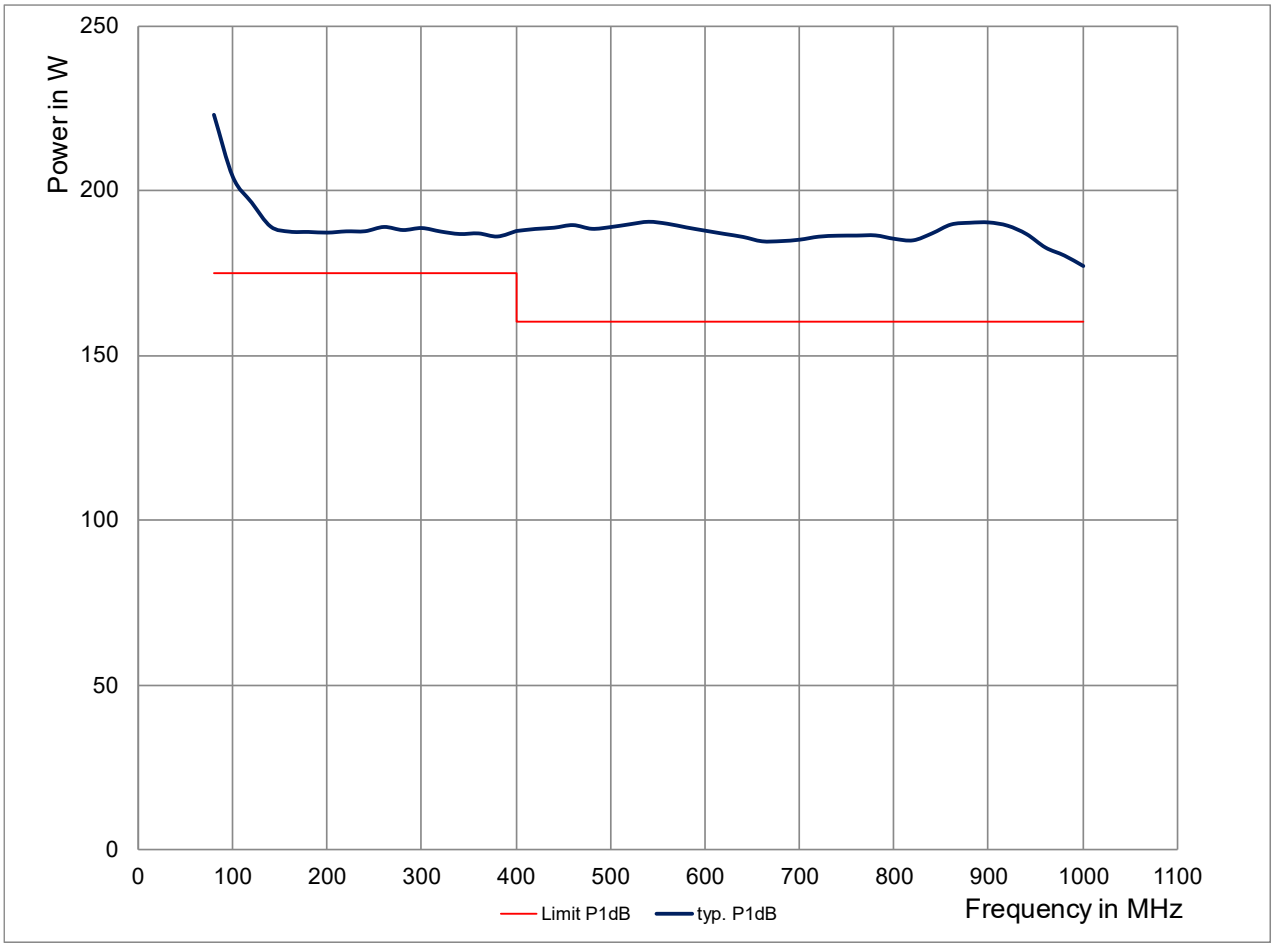
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [17]	at 110 V	7.7 A
	at 230 V	3.7 A
Rated power	RF_{cw} = 125 W (RMS), VSWR = 1	850 VA

[17] The appropriate connection has to be provided on site.

R&S®BBA150-BC160, power class: 160 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		160 W (52.0 dBm)
Output power	< 400 MHz	min. 180 W (52.5 dBm)
	> 400 MHz	min. 170 W (52.3 dBm)
Output power at 1 dB compression	< 400 MHz	min. 175 W (52.4 dBm)
	> 400 MHz	min. 160 W (52.0 dBm)
Nominal power gain	at 400 MHz	nom. 55.4 dB
Gain flatness		< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 46.0 dBm/tone, 1 MHz spacing	nom. < –26 dBc
Harmonics	at 160 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 160 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –65 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 57 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 21 kg (46 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

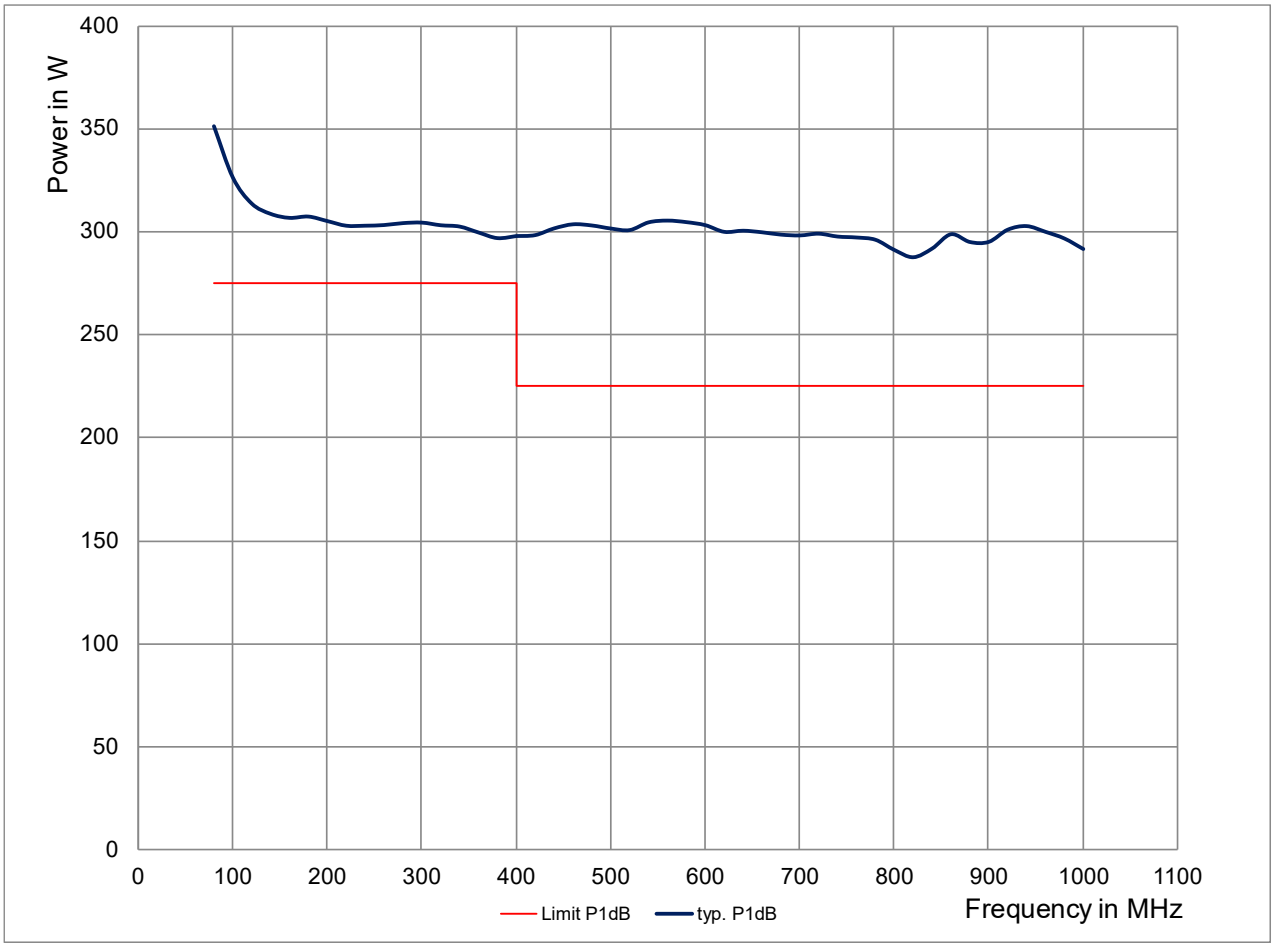
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [18]	at 200 V	8.5 A
	at 230 V	7.4 A
Rated power	RF_{cw} = 160 W (RMS), VSWR = 1	1.7 kVA

[18] The appropriate connection has to be provided on site.

R&S®BBA150-BC250, power class: 250 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		250 W (54.0 dBm)
Output power		min. 280 W (54.5 dBm)
Output power at 1 dB compression	< 400 MHz	min. 275 W (54.4 dBm)
	> 400 MHz	min. 225 W (53.5 dBm)
Nominal power gain	at 400 MHz	nom. 57.4 dB
Gain flatness		< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 47.5 dBm/tone, 1 MHz spacing	nom. < –23 dBc
Harmonics	at 250 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 250 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –65 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 58 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 21 kg (46 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

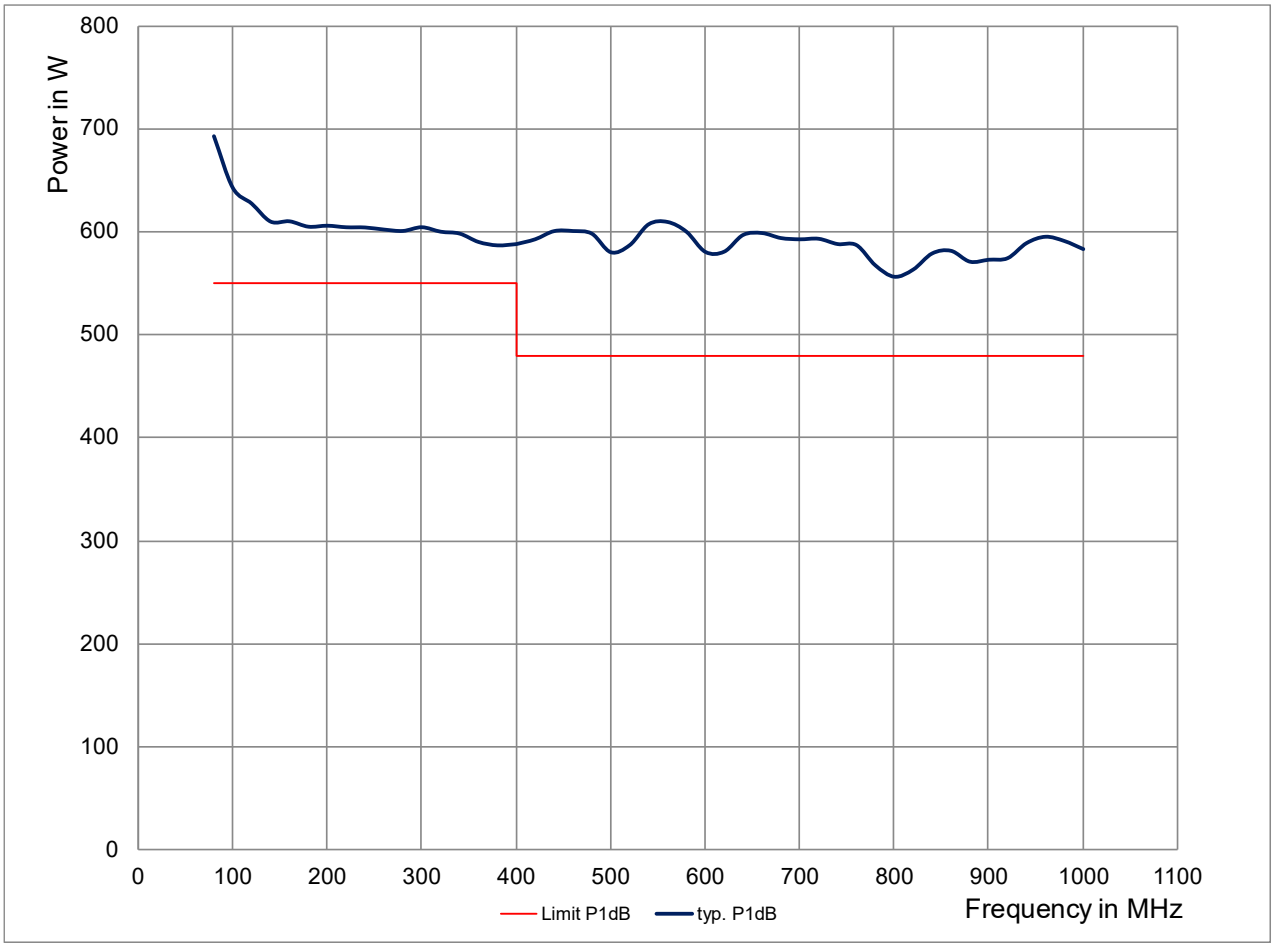
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [19]	at 200 V	8.5 A
	at 230 V	7.4 A
Rated power	RF_{cw} = 250 W (RMS), VSWR = 1	1.7 kVA

[19] The appropriate connection has to be provided on site.

R&S®BBA150-BC500, power class: 500 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		500 W (57.0 dBm)
Output power	< 400 MHz	min. 580 W (57.6 dBm)
	> 400 MHz	min. 530 W (57.2 dBm)
Output power at 1 dB compression	< 400 MHz	min. 550 W (57.4 dBm)
	> 400 MHz	min. 480 W (56.8 dBm)
Nominal power gain	at 400 MHz	nom. 60.4 dB
Gain flatness		< ±3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 50.8 dBm/tone, 1 MHz spacing	nom. < –23 dBc
Harmonics	at 500 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 500 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 58 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 33 kg (73 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

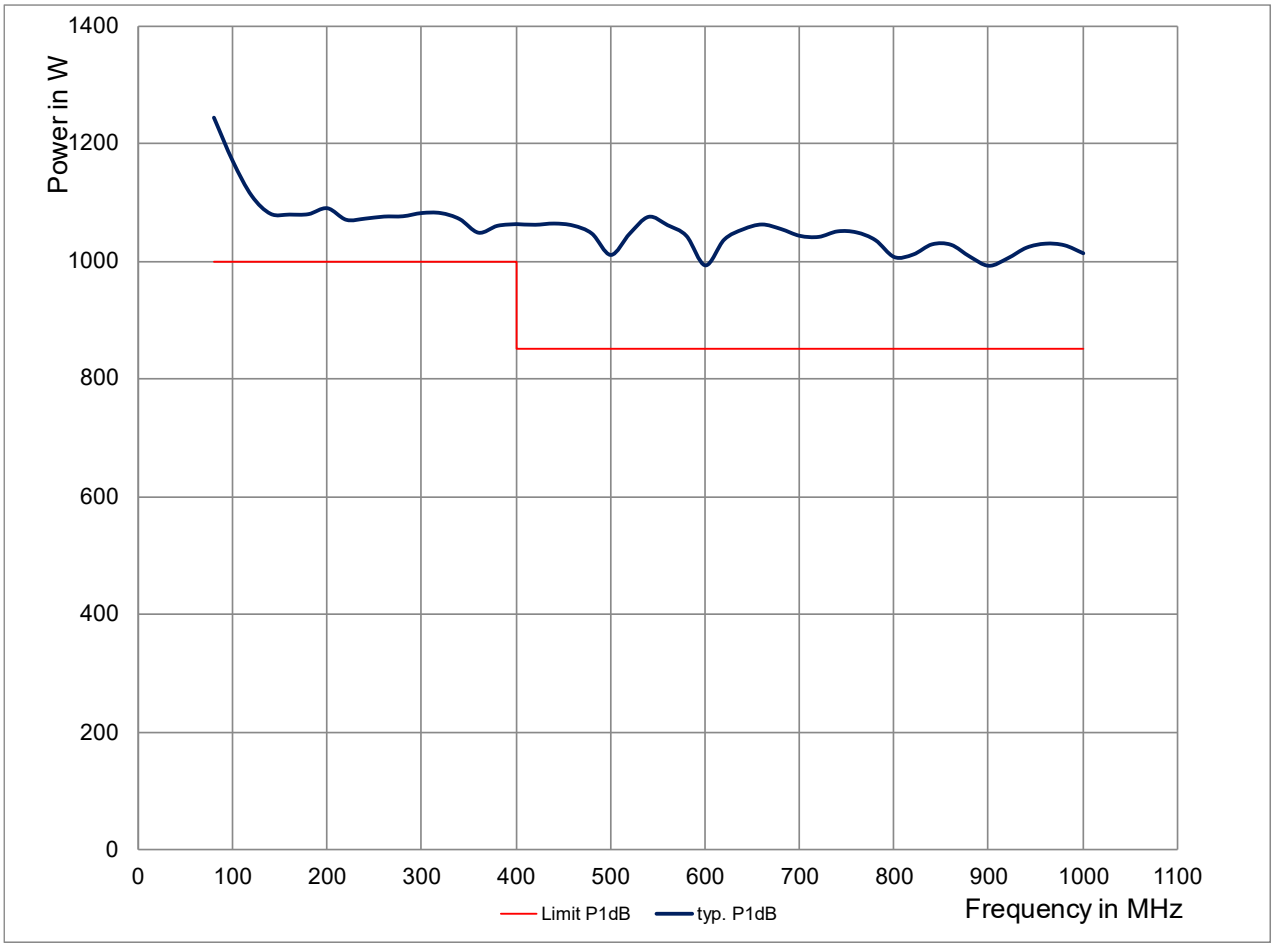
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [20]		max. 16 A
Rated power	RF_{cw} = 500 W (RMS), VSWR = 1	3.0 kVA

[20] The appropriate connection has to be provided on site.

R&S®BBA150-BC1000, power class: 1000 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		1000 W (60.0 dBm)
Output power	< 400 MHz	min. 1025 W (60.1 dBm)
	> 400 MHz	min. 925 W (59.7 dBm)
Output power at 1 dB compression	< 400 MHz	min. 1000 W (60.0 dBm)
	> 400 MHz	min. 850 W (59.3 dBm)
Nominal power gain	at 400 MHz	nom. 63.4 dB
Gain flatness		< ±3.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 53.3 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 1000 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 1000 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 66 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 12 HU, depth: 800 mm (31.5 in)
Weight	amplifier system incl. rack	approx. 120 kg (265 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	$^{7}/_{16}$ DIN female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

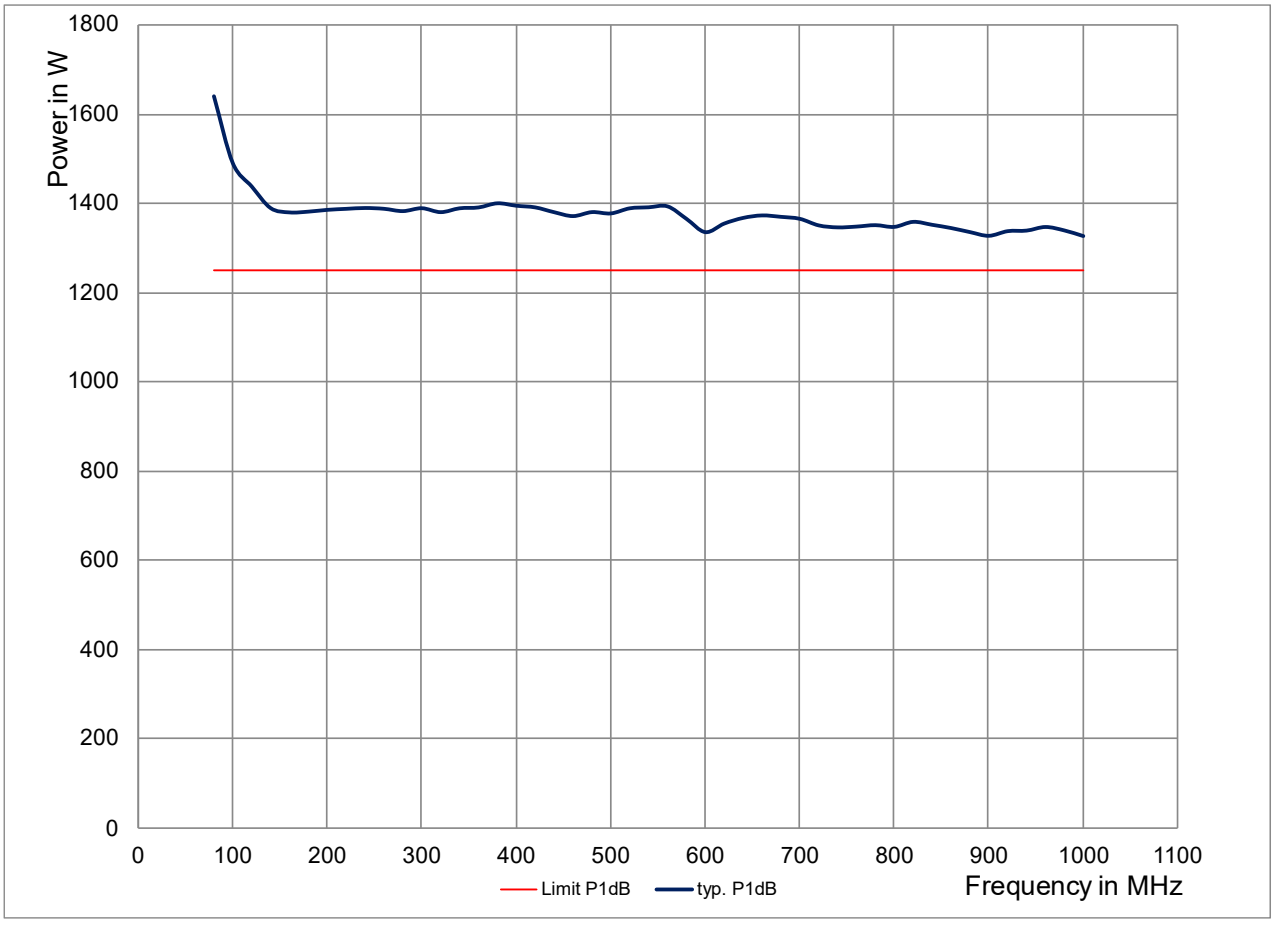
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [21]	at 230 V per phase	13.0 A/13.0 A/0.1 A
Rated power	RF_{cw} = 1000 W (RMS), VSWR = 1	6.0 kVA

[21] The appropriate connection has to be provided on site.

R&S®BBA150-BC1250, power class: 1250 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		1250 W (60.9 dBm)
Output power	80 MHz to 400 MHz	min. 1300 W (61.1 dBm)
	400 MHz to 1 GHz	min. 1250 W (60.9 dBm)
Output power at 1 dB compression		min. 1250 W (60.9 dBm)
Nominal power gain	at 400 MHz	nom. 64.2 dB
Gain flatness		< ±4 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 55.9 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 1250 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 1250 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 66 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 20 HU, depth: 1000 mm (39.4 in)
Weight	amplifier system incl. rack	approx. 180 kg (397 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	1 $^{5}/_{8}$" EIA female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

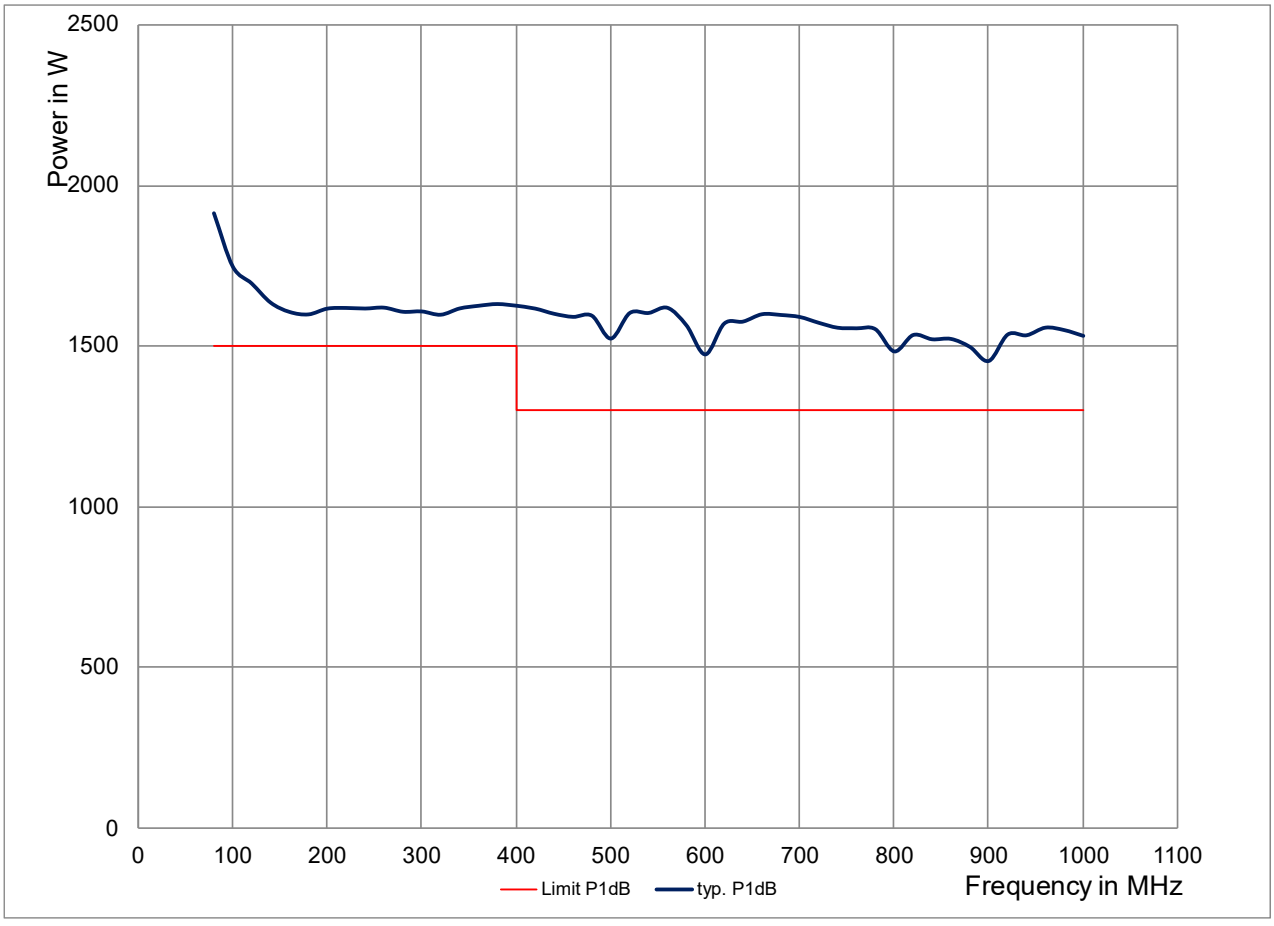
Electrical specifications

AC supply voltage		
Nominal operating voltage range		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [22]	at 230 V per phase	11.6 A
Rated power	RF_{cw} = 1250 W (RMS), VSWR = 1	8.0 kVA

[22] The appropriate connection has to be provided on site.

R&S®BBA150-BC1500, power class: 1500 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		1500 W (61.8 dBm)
Output power	80 MHz to 400 MHz	min. 1550 W (62.0 dBm)
	400 MHz to 1 GHz	min. 1400 W (61.5 dBm)
Output power at 1 dB compression	80 MHz to 400 MHz	min. 1500 W (61.8 dBm)
	400 MHz to 1 GHz	min. 1300 W (61.2 dBm)
Nominal power gain	at 400 MHz	nom. 65.0 dB
Gain flatness		< ±4 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 55.2 dBm/tone, 1 MHz spacing	nom. < –22.1 dBc
Harmonics	at 1500 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 1500 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 66 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 20 HU, depth: 1000 mm (39.4 in)
Weight	amplifier system incl. rack	approx. 180 kg (397 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	1 $^{5}/_{8}$" EIA female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

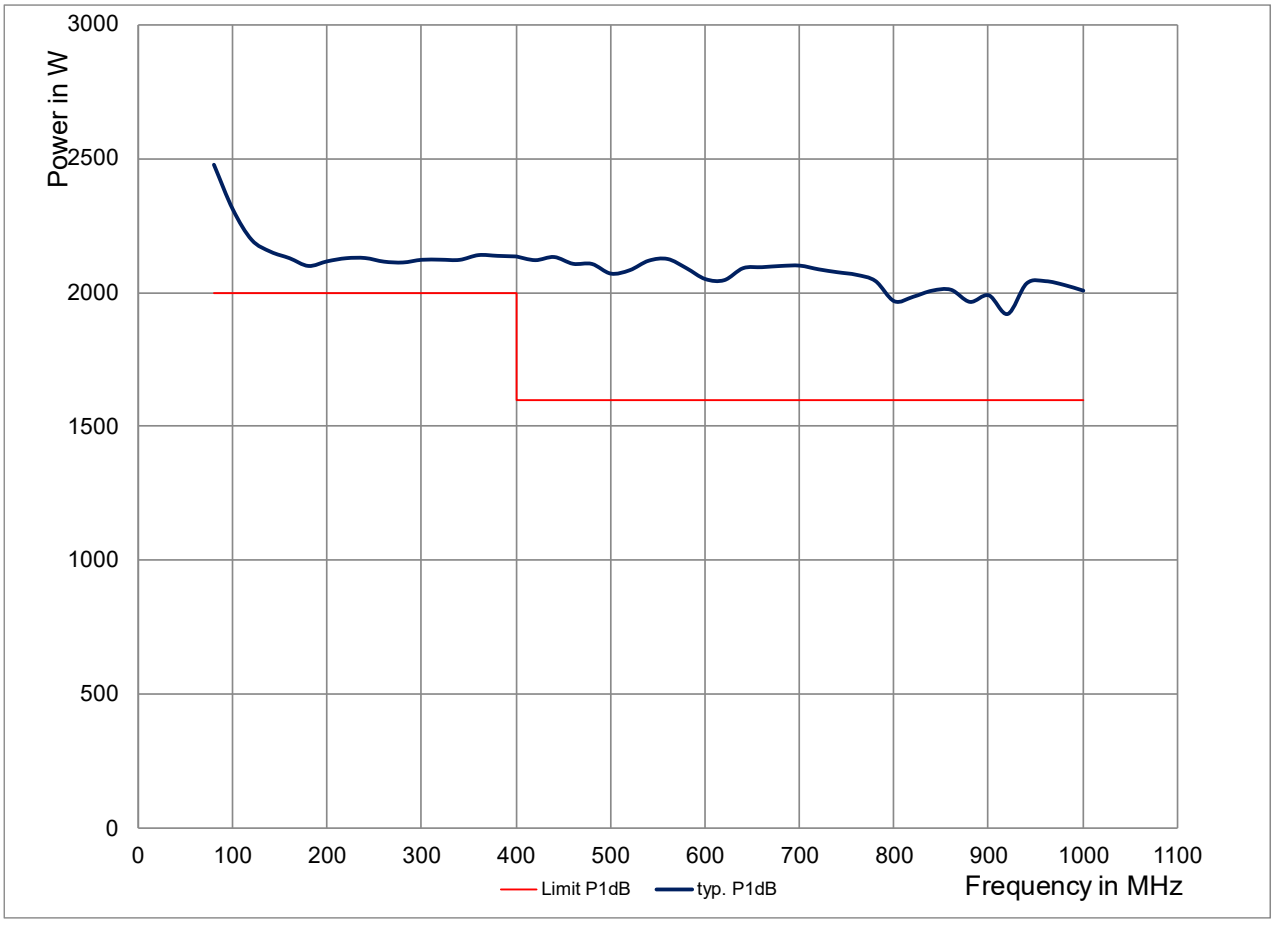
Electrical specifications

AC supply voltage		
Nominal operating voltage range		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [23]	at 230 V per phase	11.6 A
Rated power	RF_{cw} = 1500 W (RMS), VSWR = 1	8.0 kVA

[23] The appropriate connection has to be provided on site.

R&S®BBA150-BC2000, power class: 2000 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		2000 W (63.0 dBm)
Output power	80 MHz to 400 MHz	min. 2000 W (63.0 dBm)
	400 MHz to 1 GHz	min. 1800 W (62.6 dBm)
Output power at 1 dB compression	80 MHz to 400 MHz	min. 2000 W (63.0 dBm)
	400 MHz to 1 GHz	min. 1600 W (62.0 dBm)
Nominal power gain	at 400 MHz	nom. 66.4 dB
Gain flatness		< ±4 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 56.0 dBm/tone, 1 MHz spacing	nom. < –22.6 dBc
Harmonics	at 2000 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 2000 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 74 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 20 HU, depth: 1000 mm (39.4 in)
Weight	amplifier system incl. rack	approx. 240 kg (551 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	1 $^{5}/_{8}$" EIA female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

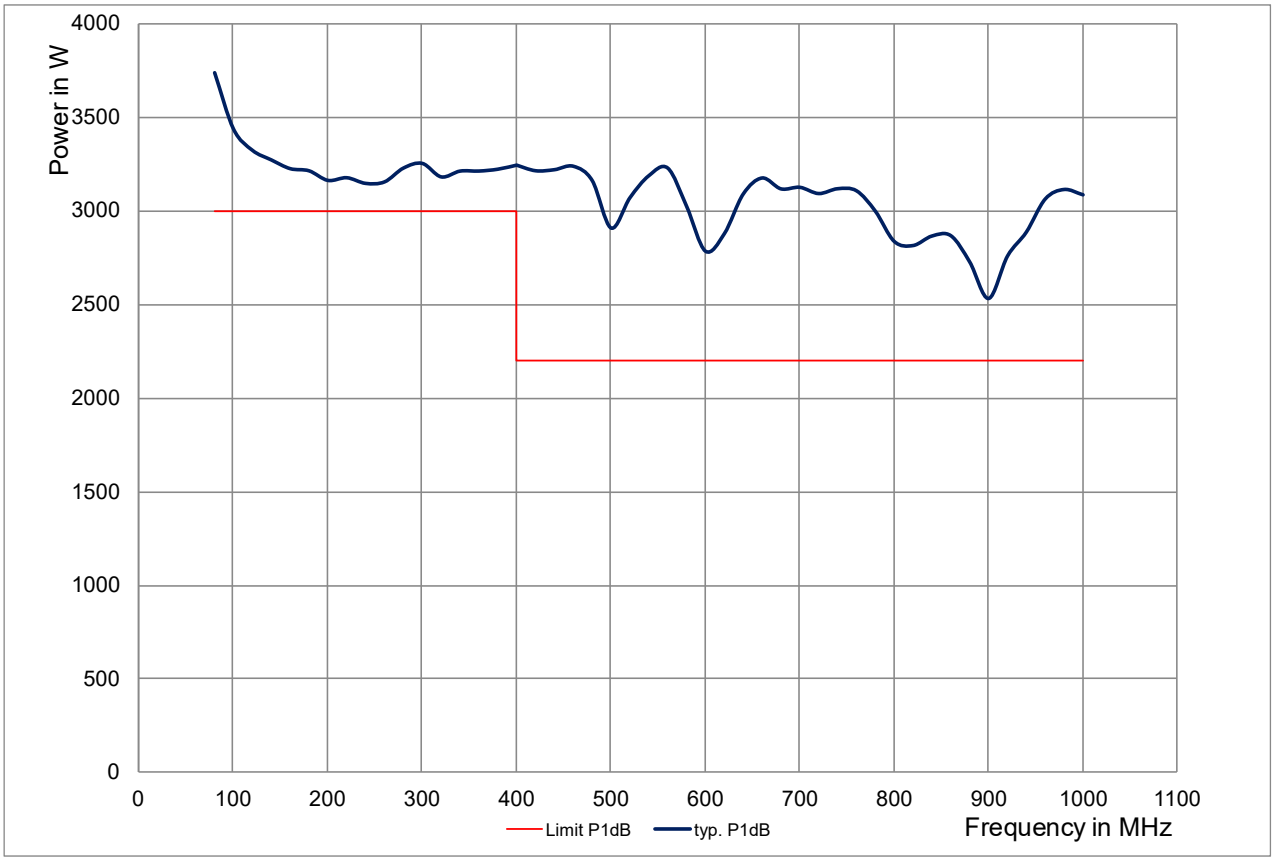
Electrical specifications

AC supply voltage		
Nominal operating voltage range		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [24]	at 230 V per phase	23.8 A/11.9 A/11.9 A
Rated power	RF_{cw} = 2000 W (RMS), VSWR = 1	11.0 kVA

[24] The appropriate connection has to be provided on site.

R&S®BBA150-BC3000, power class: 3000 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		80 MHz to 1 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		3000 W (64.8 dBm)
Output power	80 MHz to 400 MHz	min. 3100 W (64.9 dBm)
	400 MHz to 1 GHz	min. 2600 W (64.2 dBm)
Power output at 1 dB compression	80 MHz to 400 MHz	min. 3000 W (64.8 dBm)
	400 MHz to 1 GHz	min. 2200 W (63.8 dBm)
Nominal power gain	at 400 MHz	nom. 68.2 dB
Gain flatness		< ±4 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 57.8 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 3000 W, entire band except 320 MHz to 550 MHz	< –20 dBc
	at 3000 W, 320 MHz to 550 MHz	< –17 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 10 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 74 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 35 HU, depth: 1000 mm (39.4 in)
Weight	amplifier system incl. rack	approx. 310 kg (551 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	1 $^{5}/_{8}$" EIA female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

Electrical specifications

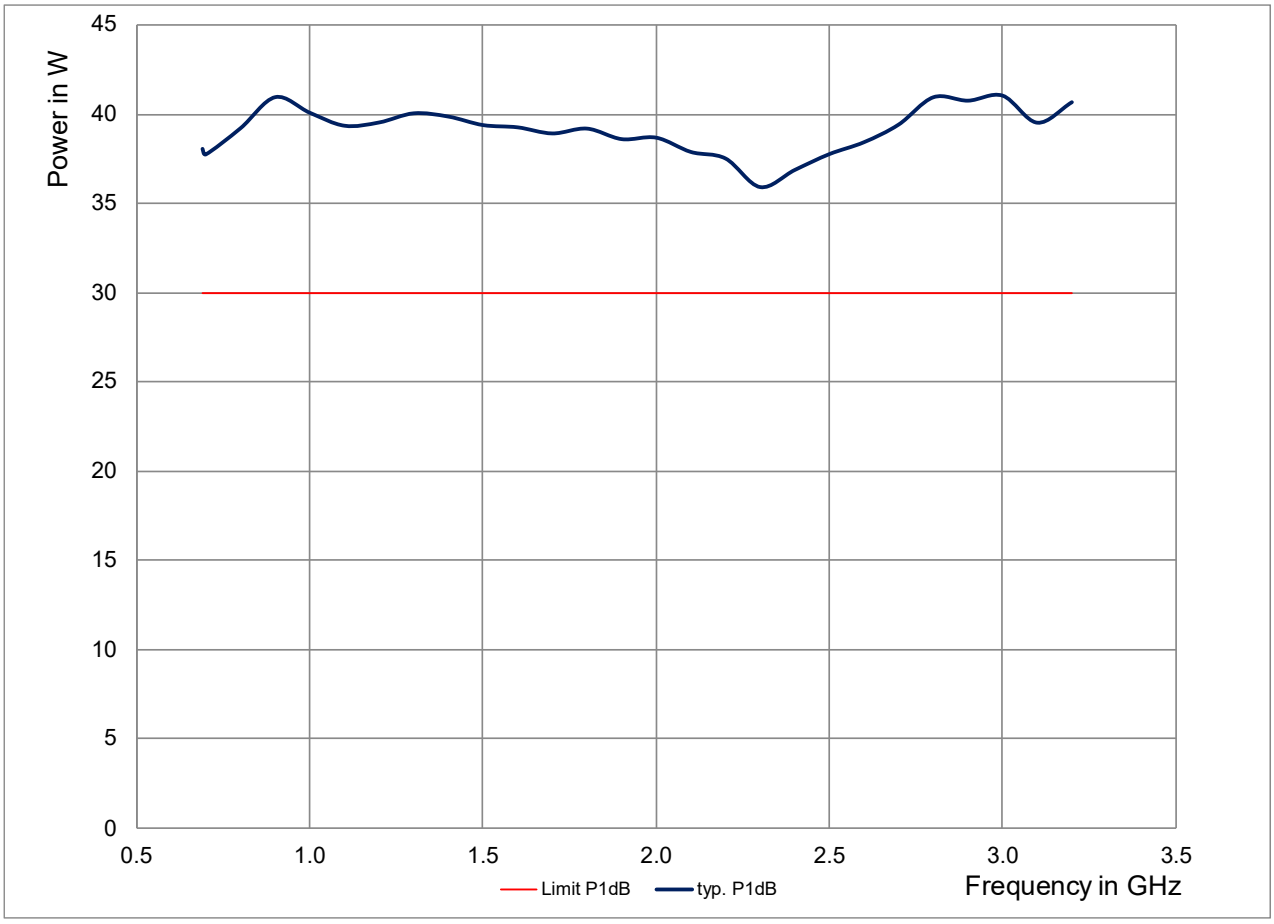
AC supply voltage		
Nominal operating voltage range		380 V to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [25]	at 230 V, per phase	23.8 A/23.8 A/23.8 A
Rated power	RF_{cw} = 3000 W (RMS), VSWR = 1	17.0 kVA

[25] The appropriate connection has to be provided on site.

Frequency band D from 0.69 GHz to 3.2 GHz

R&S®BBA150-D30, power class: 30 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		0.69 GHz to 3.2 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		30 W (44.8 dBm)
Output power		min. 35 W (45.4 dBm)
Power output at 1 dB compression		min. 30 W (44.8 dBm)
Nominal power gain	at 3000 MHz	nom. 48.2 dB
Gain flatness		< ±2.0 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 38.8 dBm/tone, 1 MHz spacing	nom. < –23 dBc
Harmonics	at 30 W, < 1.1 GHz	< –18 dBc
	at 30 W, ≥ 1.1 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure	at maximum gain	nom. < 12.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 46 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 11 kg (24 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

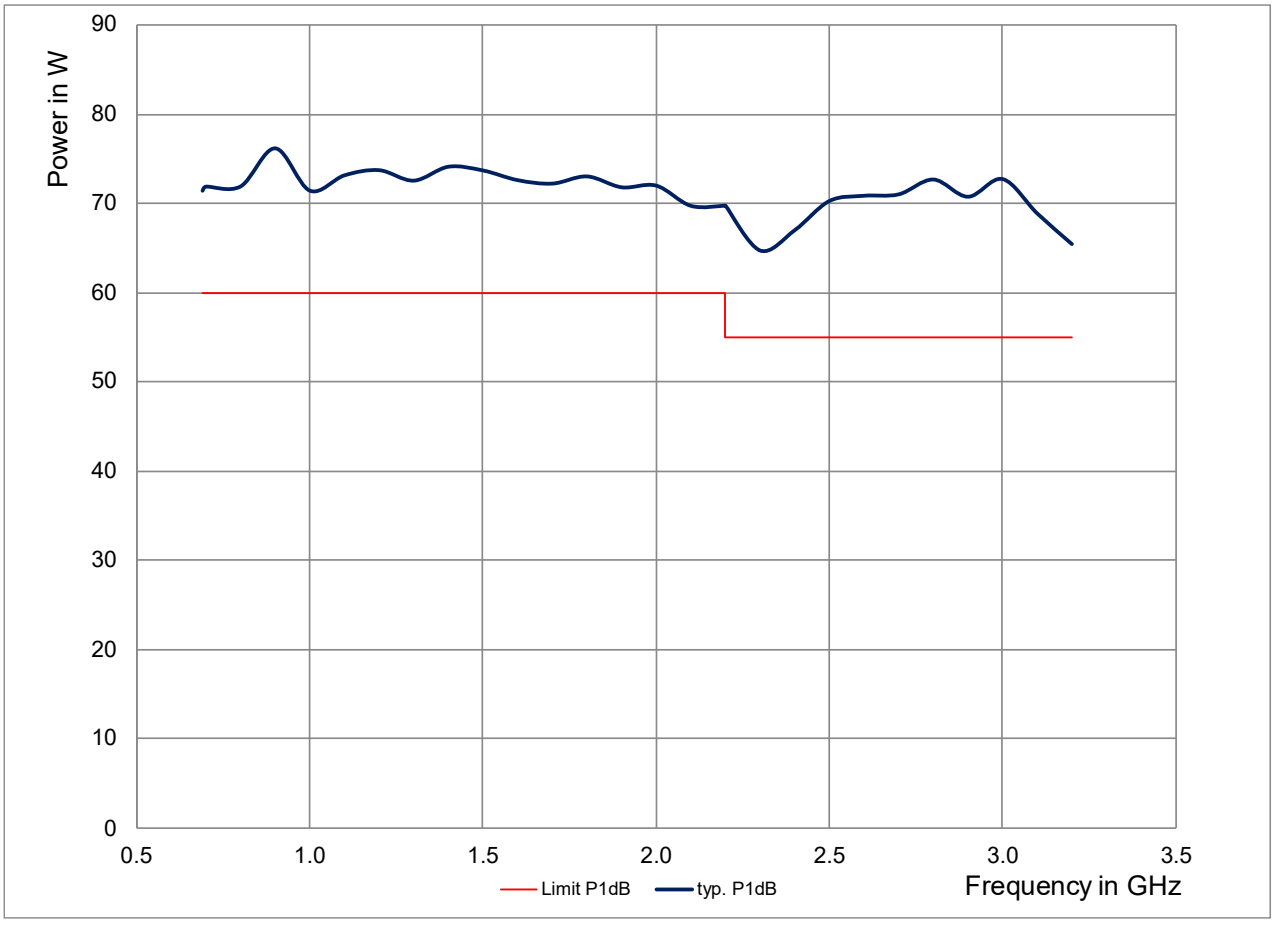
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [26]	at 110 V	3.7 A
	at 230 V	1.8 A
Rated power	RF_{cw} = 30 W (RMS), VSWR = 1	410 VA

[26] The appropriate connection has to be provided on site.

R&S®BBA150-D60, power class: 60 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		0.69 GHz to 3.2 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		60 W (47.8 dBm)
Output power		min. 65 W (48.1 dBm)
Power output at 1 dB compression	0.69 GHz to 2.2 GHz	min. 60 W (47.8 dBm)
	≥ 2.2 GHz	min. 55 W (47.4 dBm)
Nominal power gain	at 3000 MHz	nom. 51.2 dB
Gain flatness		< ±2 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 41.2 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 60 W, < 1.8 GHz	< –17 dBc
	at 60 W, ≥ 1.8 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure	at maximum gain	nom. < 12.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 46 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 13 kg (29 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

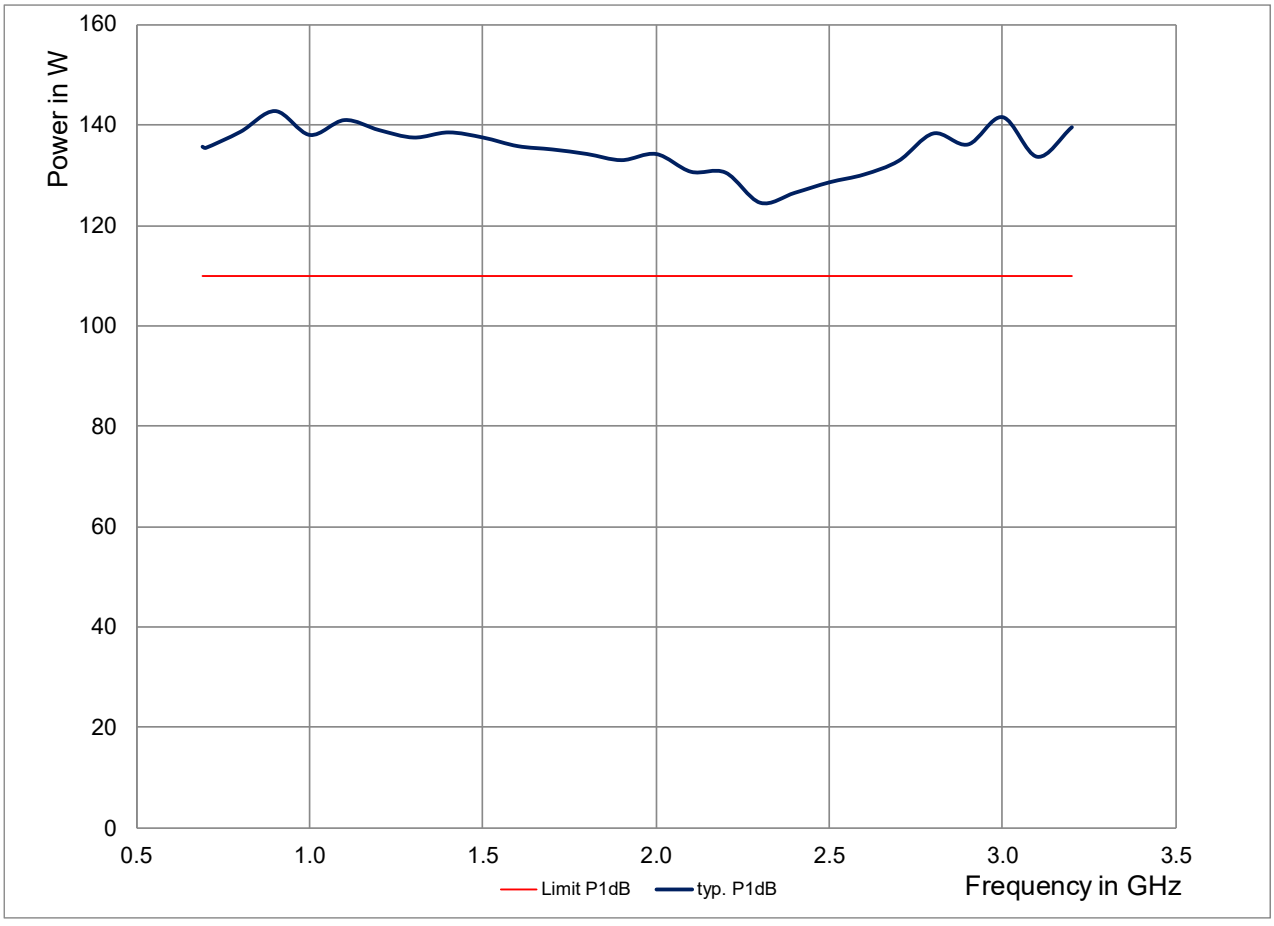
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [27]	at 110 V	5.7 A
	at 230 V	2.7 A
Rated power	RF_{cw} = 60 W (RMS), VSWR = 1	630 VA

[27] The appropriate connection has to be provided on site.

R&S®BBA150-D110, power class: 110 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		0.69 GHz to 3.2 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		110 W (50.4 dBm)
Output power		min. 120 W (50.8 dBm)
Power output at 1 dB compression		min. 110 W (50.4 dBm)
Nominal power gain	at 3000 MHz	nom. 53.8 dB
Gain flatness		< ±2.7 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 44.4 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 110 W, < 1.8 GHz	< –17 dBc
	at 110 W, ≥ 1.8 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure	at maximum gain	nom. < 12.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 46 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 17 kg (37 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

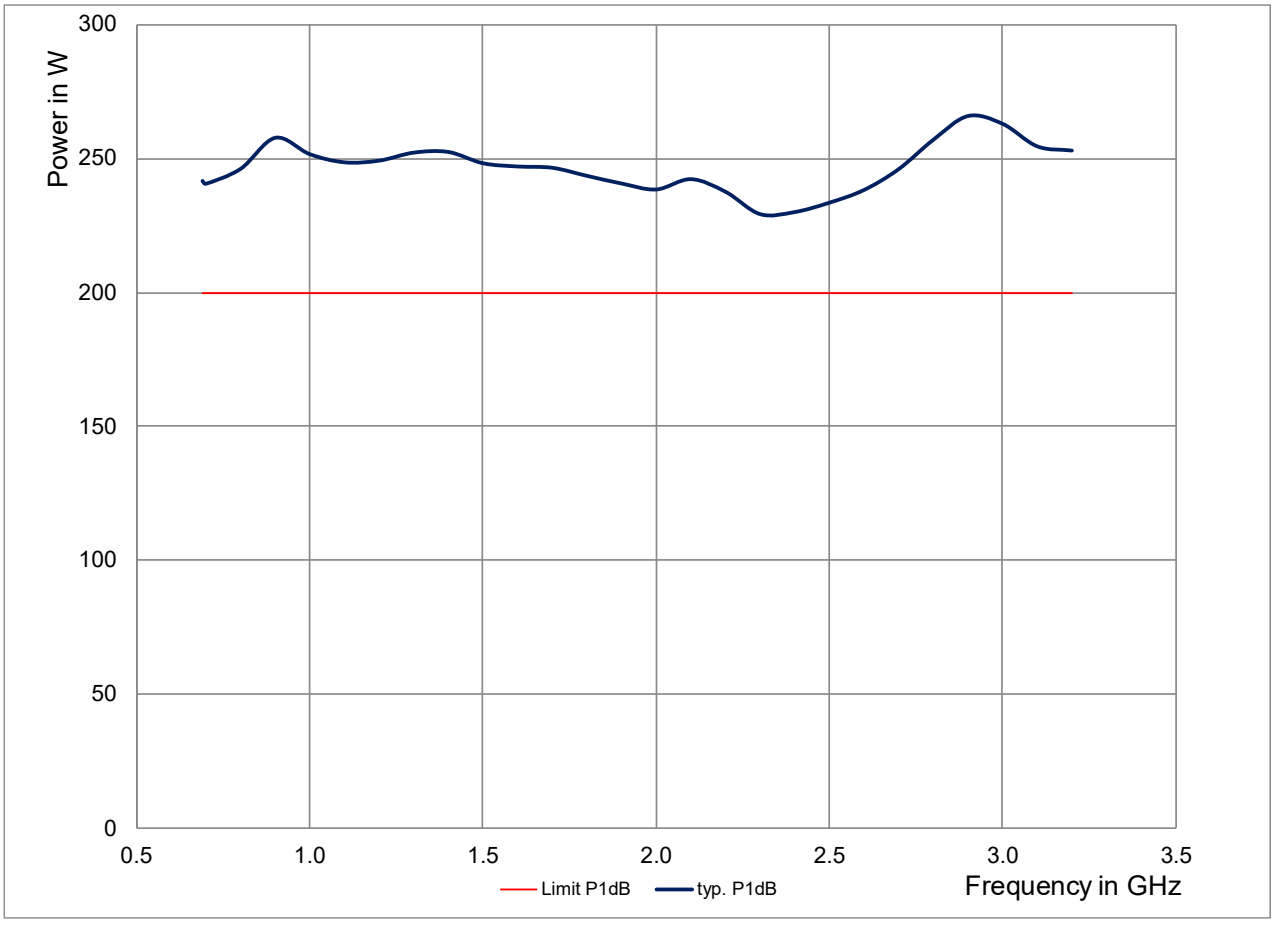
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [28]	at 110 V	11.4 A
	at 230 V	5.4 A
Rated power	RF_{cw} = 110 W (RMS), VSWR = 1	1.25 kVA

[28] The appropriate connection has to be provided on site.

R&S®BBA150-D200, power class: 200 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		0.69 GHz to 3.2 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		200 W (53 dBm)
Output power		min. 200 W (53 dBm)
Power output at 1 dB compression		min. 200 W (53 dBm)
Nominal power gain	at 3000 MHz	nom. 56.4 dB
Gain flatness		< ±2.7 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 47.0 dBm/tone, 1 MHz spacing	nom. < –22.5 dBc
Harmonics	at 200 W, < 1.8 GHz	< –16 dBc
	at 200 W, ≥ 1.8 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure	at maximum gain	nom. < 12.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 46 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight	base unit	approx. 24 kg (53 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

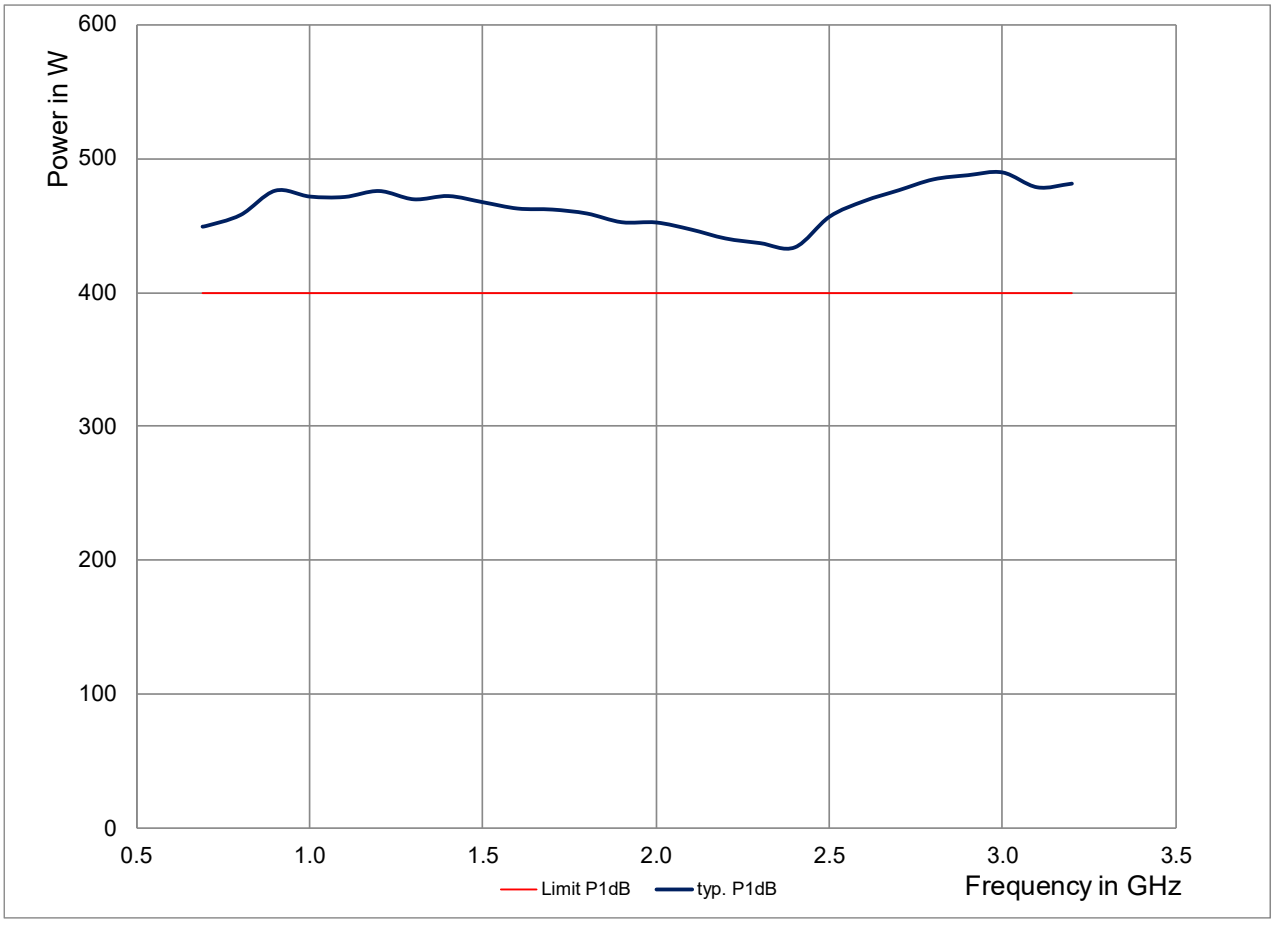
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [29]	at 120 V	16.7 A
	at 230 V	8.7 A
Rated power	RF_{cw} = 200 W (RMS), VSWR = 1	2.0 kVA

[29] The appropriate connection has to be provided on site.

R&S®BBA150-D400, power class: 400 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		0.69 GHz to 3.2 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		400 W (56 dBm)
Output power		min. 420 W (56.2 dBm)
Power output at 1 dB compression		min. 400 W (56 dBm)
Nominal power gain	at 3000 MHz	nom. 59.4 dB
Gain flatness		< ±3.2 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 50.0 dBm/tone, 1 MHz spacing	nom. < –21.6 dBc
Harmonics	at 400 W, < 1.8 GHz	< –17 dBc
	at 400 W, ≥ 1.8 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure	at maximum gain	nom. < 12.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 54 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 12 HU, depth 800 mm (31.5 in)
Weight		approx. 95 kg (209 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	$^{7}/_{16}$ DIN female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

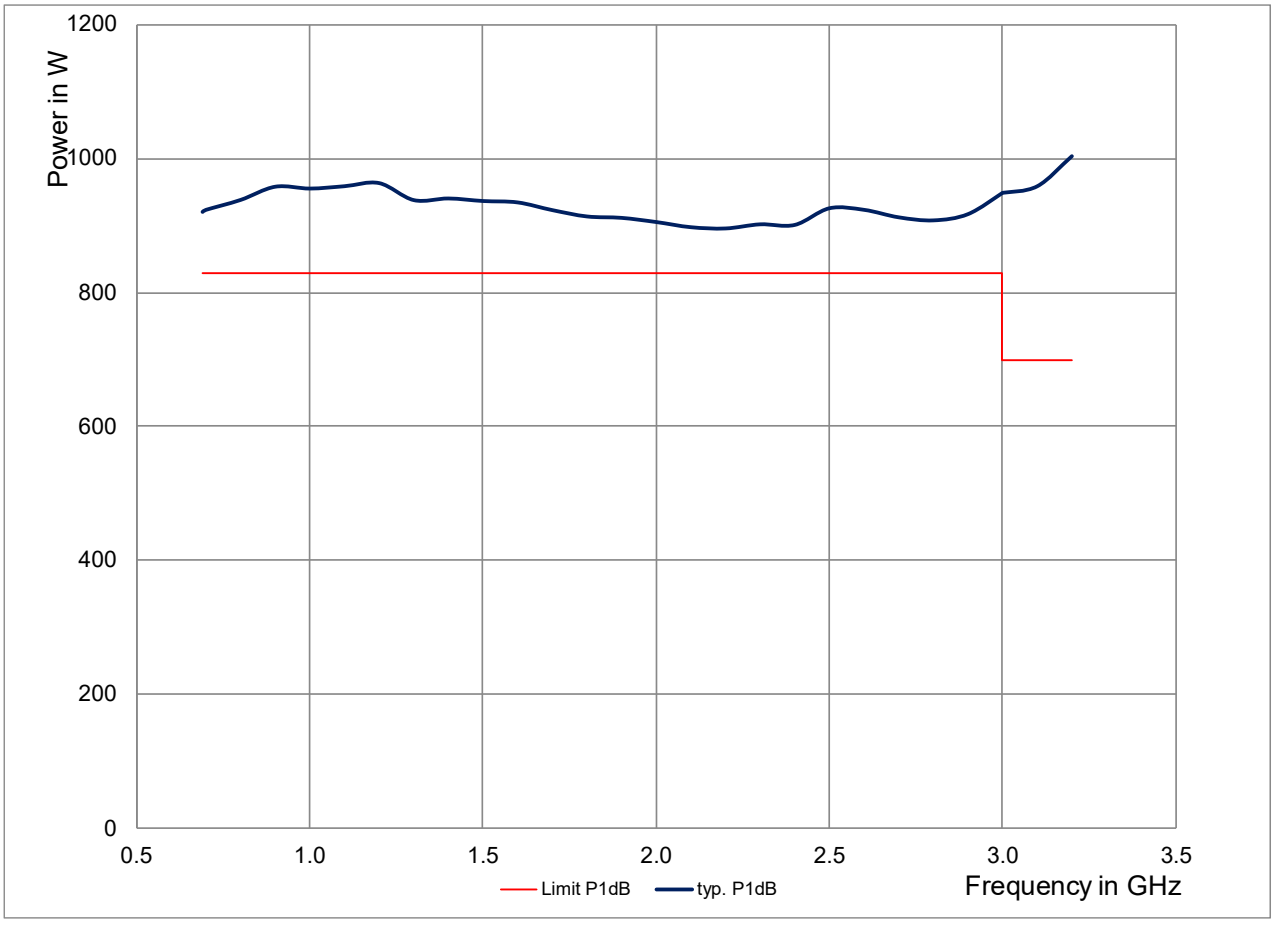
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
		380 to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [30]	at 230 V per phase	7.8 A/7.8 A/0.1 A
Rated power	RF_{cw} = 400 W (RMS), VSWR = 1	3.6 kVA

[30] The appropriate connection has to be provided on site.

R&S®BBA150-D800, power class: 800 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		0.69 GHz to 3.2 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		800 W (59.0 dBm)
Output power		min. 830 W (59.2 dBm)
Power output at 1 dB compression	0.69 GHz to 3.0 GHz	min. 830 W (59.2 dBm)
	3.0 GHz to 3.2 GHz	min. 700 W (58.5 dBm)
Nominal power gain	at 3000 MHz	nom. 62.4 dB
Gain flatness		< ±4.3 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 52.5 dBm/tone, 1 MHz spacing	nom. < –26.3 dBc
Harmonics	at 800 W, < 1.8 GHz	< –17 dBc
	at 800 W, ≥ 1.8 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure	at maximum gain	nom. < 17.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 59 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 20 HU, depth 800 mm (31.5 in)
Weight		approx. 230 kg (507 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	1 $^{5}/_{8}$" EIA female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

Electrical specifications

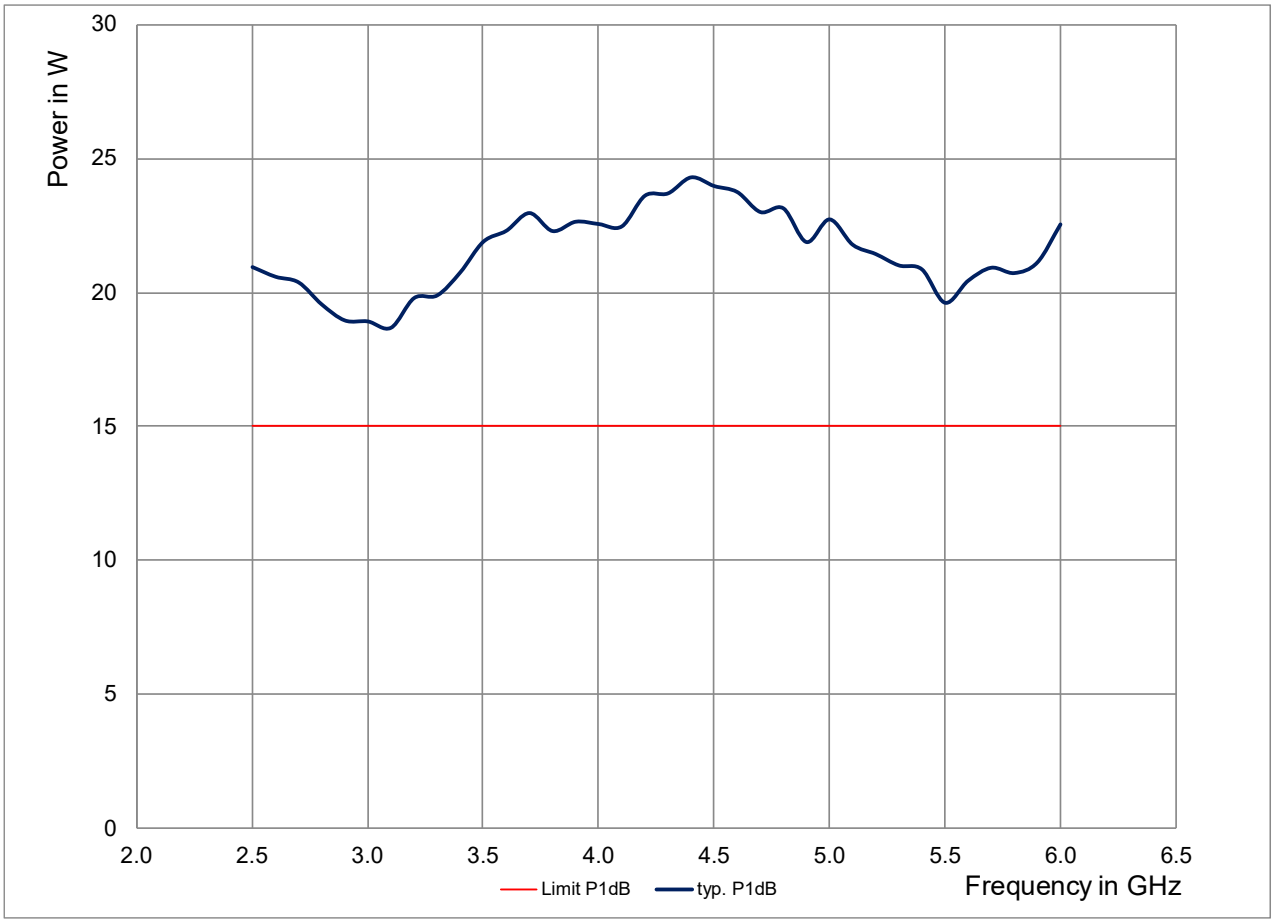
AC supply voltage		
Nominal operating voltage range		380 to 415 V AC ± 10 %, three-phase with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase 47 Hz to 63 Hz
Rated current [31]	at 230 V per phase	15.6 A/7.8 A/7.8 A
Rated power	RF_{cw} = 800 W (RMS), VSWR = 1	7.2 kVA

[31] The appropriate connection has to be provided on site.

Frequency band E from 2.5 GHz to 6.0 GHz

R&S®BBA150-E15, power class: 15 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		2.5 GHz to 6.0 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		15 W (41.8 dBm)
Output power		min. 18 W (42.6 dBm)
Output power at 1 dB compression		min. 15 W (41.8 dBm)
Nominal power gain	at 3000 MHz	nom. 45.2 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 35.8 dBm/tone, 1 MHz spacing	nom. < –27.3 dBc
Harmonics	at 15 W	< –23 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 5.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2.5:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 51 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 11 kg (24 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

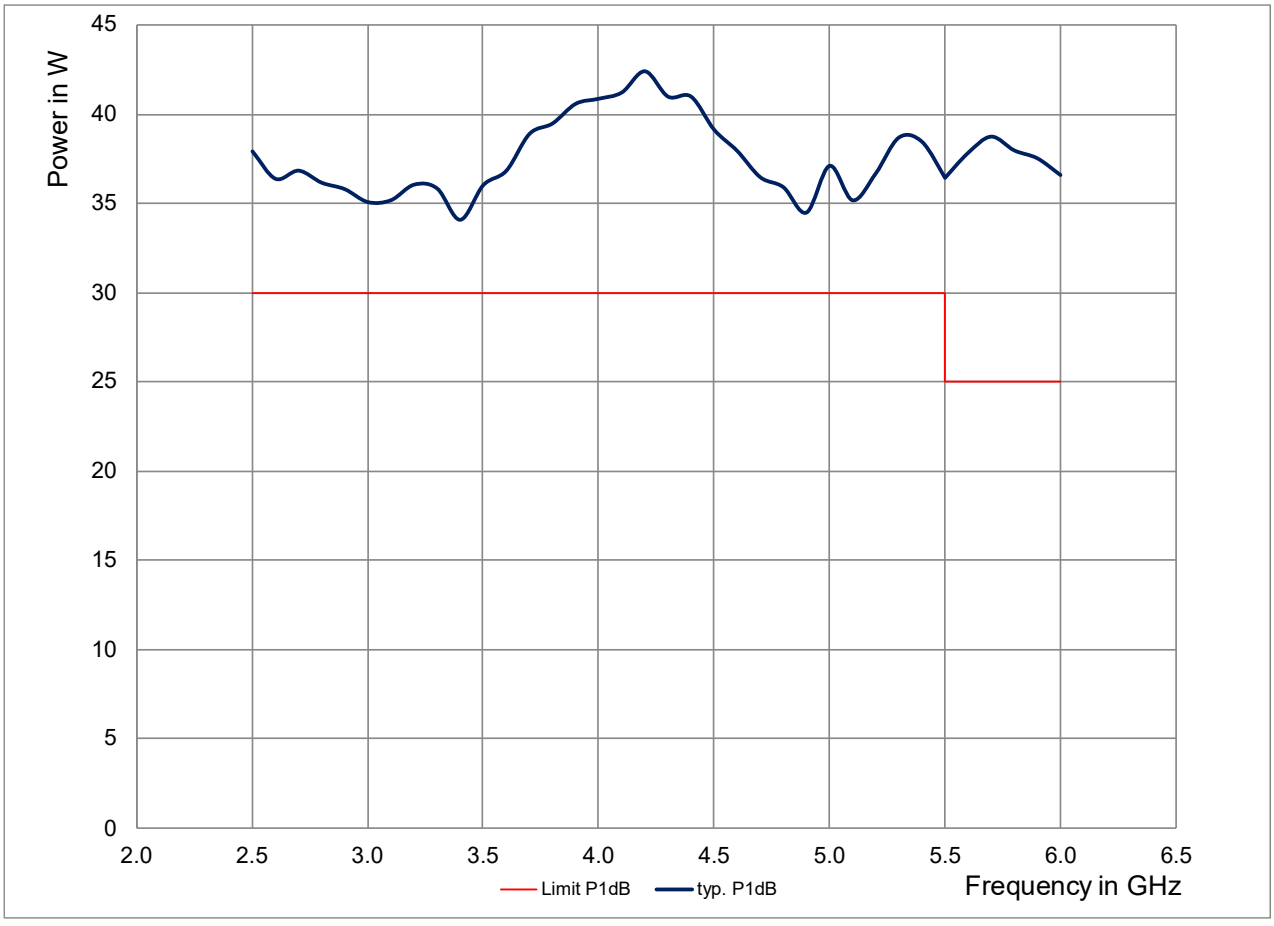
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [32]	at 110 V	4.5 A
	at 230 V	2.2 A
Rated power	RF_{cw} = 15 W (RMS), VSWR = 1	500 VA

[32] The appropriate connection has to be provided on site.

R&S®BBA150-E30, power class: 30 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		2.5 GHz to 6.0 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		30 W (44.8 dBm)
Output power	< 5.5 GHz	min. 35 W (45.4 dBm)
	≥ 5.5 GHz	min. 30 W (44.8 dBm)
Output power at 1 dB compression	< 5.5 GHz	min. 30 W (44.8 dBm)
	≥ 5.5 GHz	min. 25 W (44.0 dBm)
Nominal power gain	at 3000 MHz	nom. 48.2 dB
Gain flatness		< ±2.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 38.0 dBm/tone, 1 MHz spacing	nom. < –21 dBc
Harmonics	at 30 W	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 5.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2.5:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 51 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 11 kg (24 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

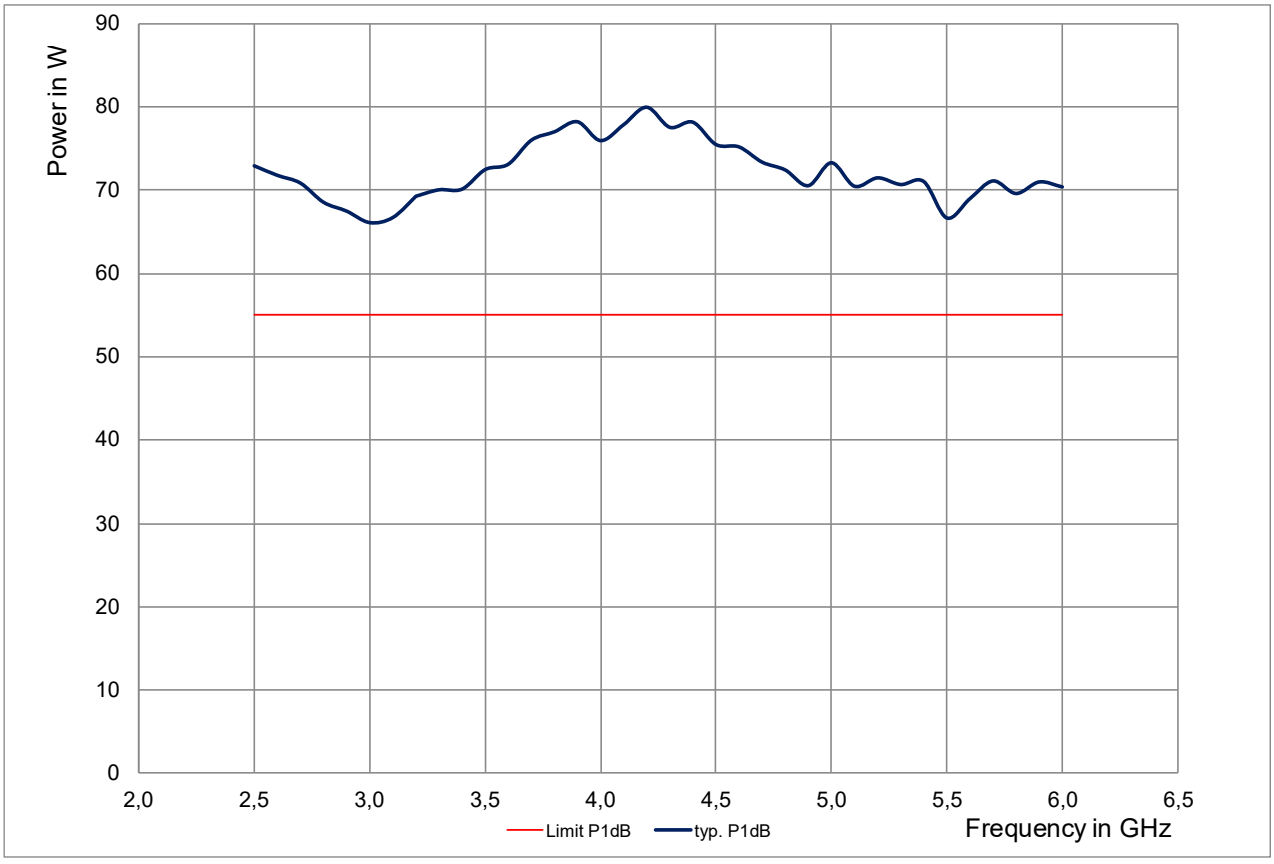
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [33]	at 110 V	4.5 A
	at 230 V	2.2 A
Rated power	RF_{cw} = 30 W (RMS), VSWR = 1	500 VA

[33] The appropriate connection has to be provided on site.

R&S®BBA150-E60, power class: 60 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		2.5 GHz to 6.0 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		60 W (47.8 dBm)
Output power	< 3.1 GHz	min. 55 W (47.4 dBm)
	≥ 3.1 GHz	min. 60 W (47.8 dBm)
Output power at 1 dB compression		min. 55 W (47.4 dBm)
Nominal power gain	at 3000 MHz	nom. 51.2 dB
Gain flatness		< ±3.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 41.4 dBm/tone, 1 MHz spacing	nom. < –20 dBc
Harmonics	at 60 W, class A, < 3.3 GHz	< –18 dBc
	at 60 W, class A, ≥ 3.3 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 5.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2.5:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 51 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 15 kg (33 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

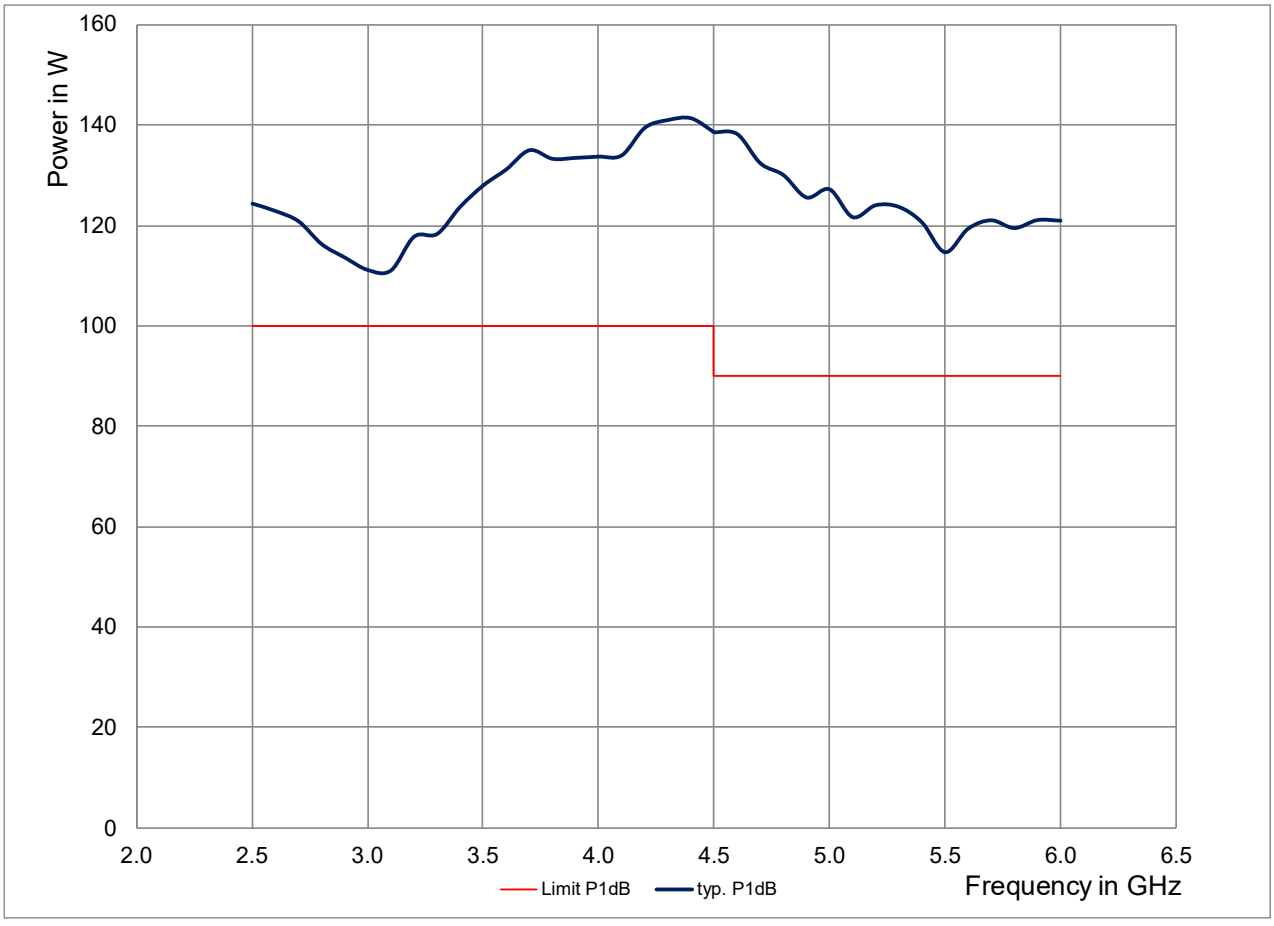
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [34]	at 110 V	7.7 A
	at 230 V	3.7 A
Rated power	RF_{cw} = 60 W (RMS), VSWR = 1	850 VA

[34] The appropriate connection has to be provided on site.

R&S®BBA150-E100, power class: 100 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		2.5 GHz to 6.0 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		100 W (50.0 dBm)
Output power	< 4.5 GHz	min. 110 W (50.4 dBm)
	≥ 4.5 GHz	min. 100 W (50.0 dBm)
Output power at 1 dB compression	< 4.5 GHz	min. 100 W (50.0 dBm)
	> 4.5 GHz	min. 90 W (49.6 dBm)
Nominal power gain	at 3000 MHz	nom. 53.4 dB
Gain flatness		< ±3.6 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 43.6 dBm/tone, 1 MHz spacing	nom. < –23.7 dBc
Harmonics	at 100 W, class A, < 3.3 GHz	< –18 dBc
	at 100 W, class A, ≥ 3.3 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 5.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2.5:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 51 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 17 kg (37 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

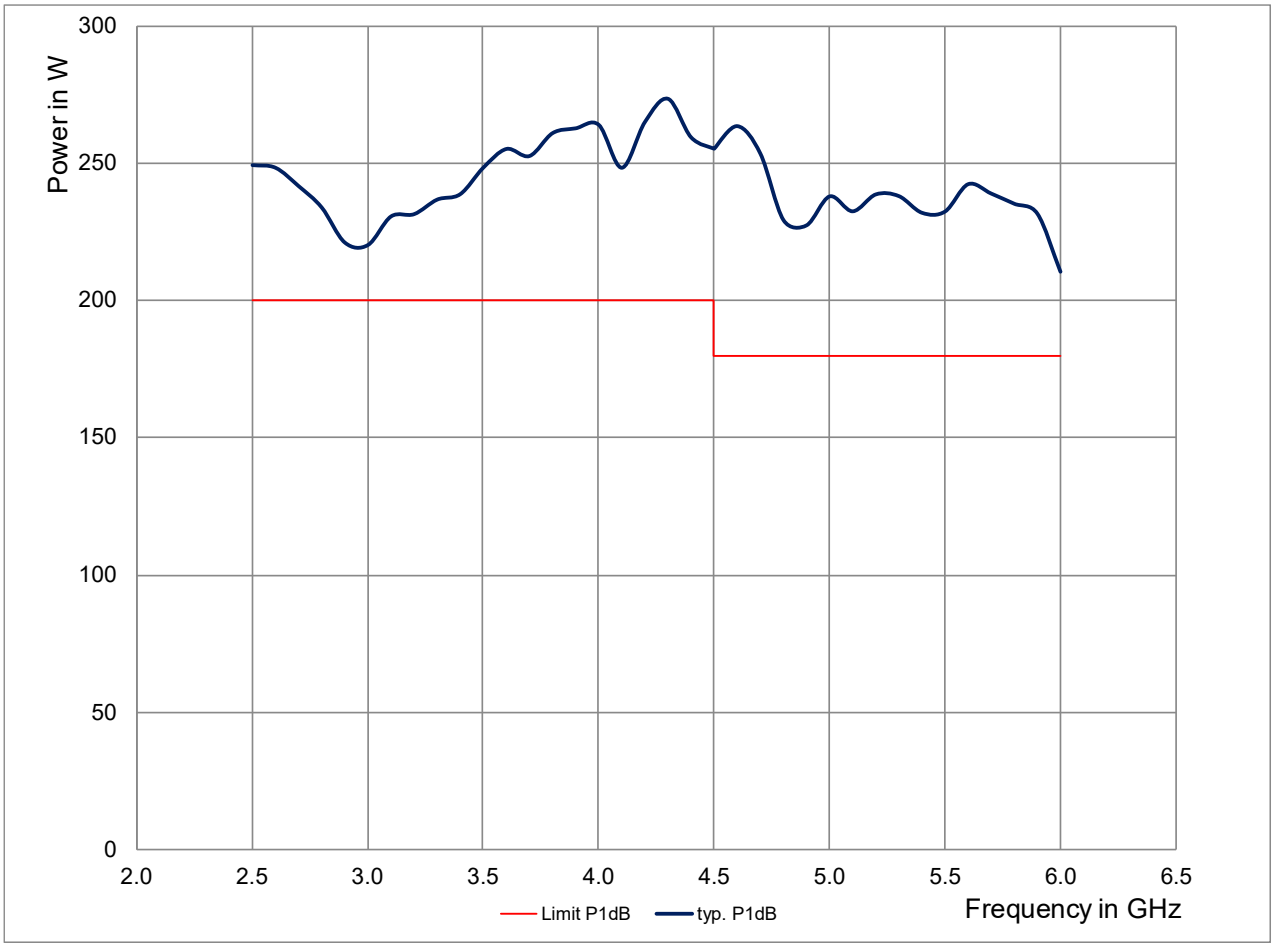
Electrical specifications

AC supply voltage		
Nominal operating voltage range		100 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [35]	at 110 V	10.6 A
	at 230 V	5.0 A
Rated power	RF_{cw} = 100 W (RMS), VSWR = 1	1.16 kVA

[35] The appropriate connection has to be provided on site.

R&S®BBA150-E200, power class: 200 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		2.5 GHz to 6.0 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		200 W (53.0 dBm)
Output power	< 4.5 GHz	min. 200 W (53.0 dBm)
	≥ 4.5 GHz	min. 190 W (52.8 dBm)
Output power at 1 dB compression	< 4.5 GHz	min. 200 W (53.0 dBm)
	≥ 4.5 GHz	min. 180 W (52.6 dBm)
Nominal power gain	at 3000 MHz	nom. 56.4 dB
Gain flatness		< ±3.6 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 46.6 dBm/tone, 1 MHz spacing	nom. < –20.7 dBc
Harmonics	at 200 W, class A, < 3.3 GHz	< –18 dBc
	at 200 W, class A, ≥ 3.3 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 5.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2.5:1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 51 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	W × H × D, incl. fans, handles and stand	430 mm × 196 mm × 580 mm (16.93 in × 7.72 in × 22.83 in)
	for rackmounting	19" $^{1}/_{1}$, 4 HU
Weight		approx. 24 kg (53 lb)

RF and sample connectors		
RF input port	either front panel or rear panel	N female
RF output port	either front panel or rear panel	N female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

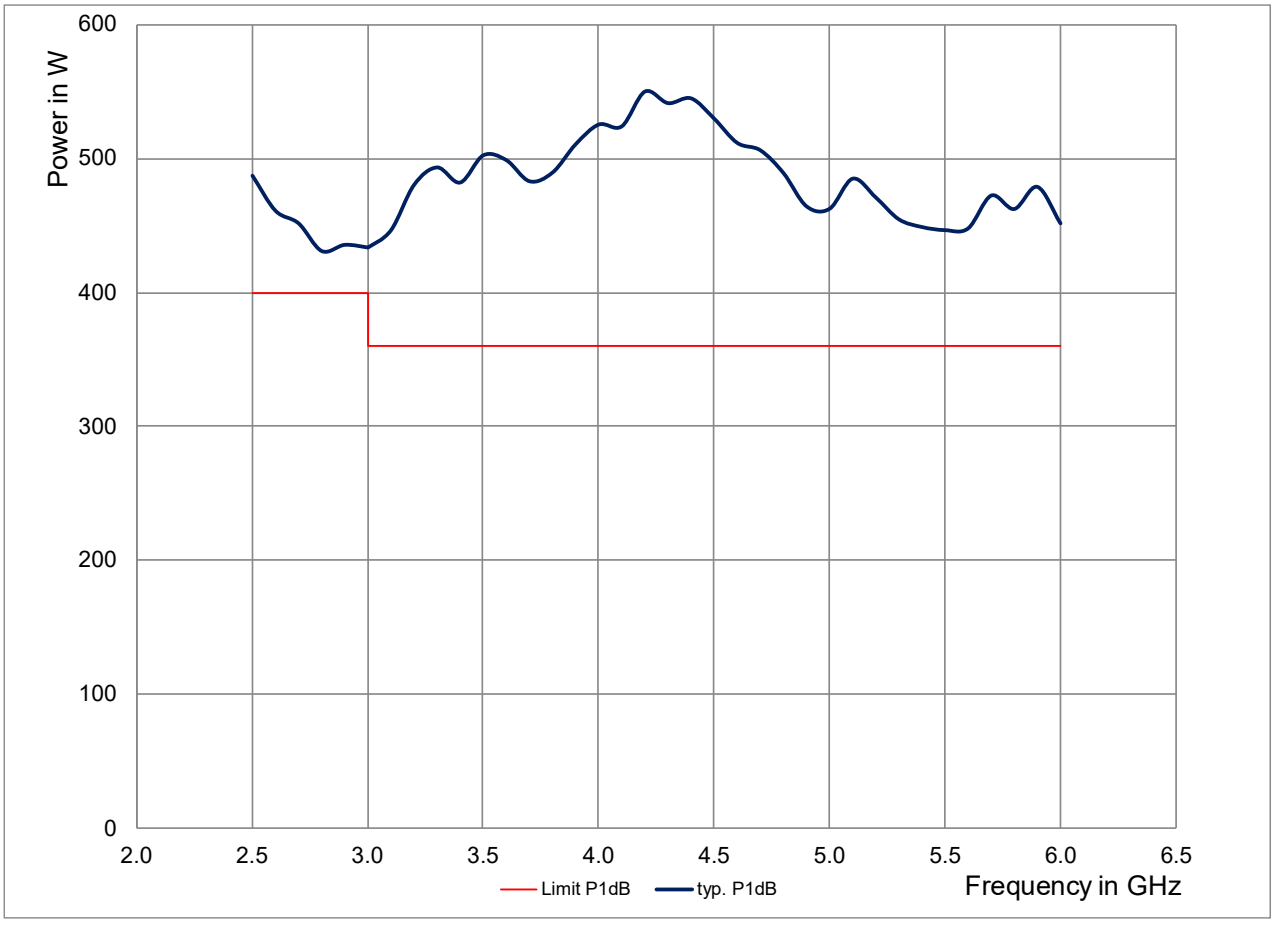
Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
Rated current [36]	at 120 V	17.5 A
	at 230 V	9.1 A
Rated power	RF_{cw} = 200 W (RMS), VSWR = 1	2.1 kVA

[36] The appropriate connection has to be provided on site.

R&S®BBA150-E400, power class: 400 W P1dB

Frequency response at 1 dB compression



RF specifications

Main parameters		
Frequency range		2.5 GHz to 6.0 GHz instantaneously
Nominal output load		50 Ω
Nominal output power		400 W (56.0 dBm)
Output power	< 4.5 GHz	min. 400 W (56.0 dBm)
	≥ 4.5 GHz	min. 380 W (55.8 dBm)
Output power at 1 dB compression	< 3 GHz	min. 400 W (56.0 dBm)
	≥ 3 GHz	min. 360 W (55.6 dBm)
Nominal power gain	at 3000 MHz	nom. 59.4 dB
Gain flatness		< ±5.5 dB
Gain adjustment range		> 15 dB
Third order intermodulation (IM3)	2-tone at 49.6 dBm/tone, 1 MHz spacing	nom. < –23.4 dBc
Harmonics	at 400 W, class A, < 3.3 GHz	< –18 dBc
	at 400 W, class A, ≥ 3.3 GHz	< –20 dBc
Spurious	carrier offset > 100 kHz	nom. –80 dBc, max. –70 dBc
Noise figure at maximum gain		nom. < 5.0 dB

Input		
Nominal input impedance		50 Ω
Input level for nominal output power		nom. –3.4 dBm
Input VSWR	at 50 Ω	max. 2.5 :1
Maximum input level	RF	+15 dBm
	DC	0 V

Output		
Nominal output impedance		50 Ω
Output mismatch tolerance	VSWR < 6:1	without foldback
	VSWR > 6:1	with gradual foldback to approx. 50 % of nominal output power, depending on load impedance
Output mismatch protection, VSWR		100 %, without damage

RF sample and detected sample signals		
RF sample signal coupling factor	RF forward and reflected sample ports, optional	approx. 52 dB, see test report for details
Detected sample signal level	detected forward and reflected sample ports, optional	up to 3.0 V DC, see test report for details

Mechanical specifications

Dimensions and weight		
Dimensions	rack setup	19" rack, 12 HU, depth 800 mm (31.5 in)
Weight		approx. 97 kg (214 lb)

RF and sample connectors		
RF input port	rear panel	N female
RF output port	rear panel	$^{7}/_{16}$ DIN female
RF sample port	forward output power, optional	N female
	reflected output power, optional	N female
Detected sample port	forward output power, optional	N female
	reflected output power, optional	N female

Electrical specifications

AC supply voltage		
Nominal operating voltage range		200 V to 240 V AC ± 10 %, single phase, 47 Hz to 63 Hz
		380 to 415 V AC ± 10 %, three-phase, with N, 47 Hz to 63 Hz
		200 V to 240 V AC ± 10 %, three-phase, 47 Hz to 63 Hz
Rated current [37]	at 230 V per phase	9.6 A/9.6 A/0.1 A
Rated power	RF_{cw} = 400 W (RMS), VSWR = 1	4.4 kVA

[37] The appropriate connection has to be provided on site.

General data

Modulation specifications

Modulation capability		AM, FM, φM or PM

Cooling specifications

Air cooling		forced air, built-in fans, air entry at front, air exit at rear

Control specifications

Remote control		
Ethernet		RJ-45, 10/100 Mbit/s, auto-negotiation, half/full duplex

Local HMI		
Local display		200 × 48 pixel, monochrome
Manual controls	resting push button	mains switch
	operation push buttons	• system standby/on • RF standby/operate • local/remote
	menu push buttons	• arrow up, down, left, right • ok • back
LED status information		• system standby/on • RF standby/operate • mute ready • interlock • error • local/remote

Web GUI		
Remote web GUI	via Ethernet	RJ-45, 10/100 Mbit/s, auto-negotiation, half/full duplex

Environmental specifications

Temperature loading	operating temperature range	0 °C to +40 °C
	storage temperature range	–40 °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
Mechanical resistance test values of desktop models	vibration, sinusoidal	5 Hz to 55 Hz, displacement: 0.15 mm, > 55 Hz to 150 Hz, acceleration: 0.5 g, in line with EN 60068-2-6
	vibration, random	effective acceleration ≤ 1.2 g, 8 Hz to 500 Hz, acceleration density: 0.002 g^2/Hz, in line with EN 60068-2-64
	shock	18 sawtooth shocks, each 40 g in 11 ms, in line with EN 60068-2-27, MIL-STD-810E, method no. 516.4, procedure I
Calibration interval		no calibration needed
Electromagnetic compatibility	immunity	in line with EN 61326-1, table 2, industrial environment

Electromagnetic emissions	overall	in line with EN 55011 (CISPR 11), industrial area, ISM group 1 class A and FCC 47 CFR part 18 §18.305
	conducted emissions	in line with EN 55011, group 1 class A
	radiated emissions from 30 MHz to 18 GHz	equipment for use in shielded areas only, normative limits of EN 55011 group 1 class A and FCC 47 CFR part 18 §18.305 exceeded: • up to 40 dB: for up to R&S®BBA150-A400, R&S®BBA150-AB350, R&S®BBA150-D200 and R&S®BBA150-E100 • up to 50 dB: for R&S®BBA150-A700, from R&S®BBA150-AB600, up to R&S®BBA150-BC250, for R&S®BBA150-D400 and R&S®BBA150-E200 • up to 60 dB: for R&S®BBA150-A1300 and R&S®BBA150-BC500
Exposure to electromagnetic fields	all-around the enclosure	in line with the limits of 2014/35, 26. BImSchV, DGUV15 exposure limit 2 (protection of health and safety of workers, consumers and the general public)
Electrical safety		in line with EN 61010-1:2010, IEC 61010-1:2011 + Corr. 2011 (third edition), CAN/CSA-C22.2 no. 61010-1-12, UL 61010-1 third edition, May 11, 2012

Protection

RF		
Load VSWR		unlimited
Interlock [38]		1 automatic interlock, 1 interactive interlock
Input protection against bias voltage	optional	DC block level ≤ 50 V DC

Power supply		
Transient voltage compatibility		category II, in line with IEC 60364-4-443
Short-circuit breaking capacity		automatic all-pole 20 A circuit breaker

Miscellaneous		
Thermal overload		shutdown at thermal overload

[38] The interlock interface of the R&S®BBA150 series is a functional interlock only and not a safety interlock. In order to realize a safety interlock on system level, a second independent safeguard has to be installed on system level.

General RF specifications

Amplifier type		class A amplifier

The specified nominal output power is valid for all amplifiers in a 4 HU chassis with RF output at rear and for single band rack models at the RF connection panel.

For single band and dual band amplifiers in a 4 HU chassis with RF output at front cable insertion loss reduces the output power:

Cable insertion loss for single band and dual band power amplifiers in 4 HU chassis with RF output at front	0 Hz to 1 GHz	≤ 0.20 dB
	1 GHz to 2 GHz	≤ 0.30 dB
	2 GHz to 3 GHz	≤ 0.40 dB
	3 GHz to 6 GHz	≤ 0.50 dB
	6 GHz to 8 GHz	≤ 0.60 dB

In case of rack integration, the loss due to cables and RF switches needs to be taken into account. The insertion loss of RF switches is specified under “Switching specifications” in this specifications document.

RF switching specifications – input

RF input switch, R&S®BBA-B110 option		
Switch type		1:2 or 2:1, mechanical
RF input port	at desktop model or rack connection panel	N female
	switch	SMA female
Frequency range		0 Hz to 18 GHz
Switching time		< 10 ms
Life		10 000 000 cycles
Insertion loss	0 Hz to 3 GHz	≤ 0.15 dB, without cable loss
	3 GHz to 8 GHz	≤ 0.20 dB, without cable loss
	8 GHz to 12.4 GHz	≤ 0.25 dB, without cable loss
	12.4 GHz to 18 GHz	≤ 0.35 dB, without cable loss
RF input switch, R&S®BBA-B116 option		
Switch type		1:6, mechanical
RF input port	at rack connection panel	N female
	switch	SMA female
Frequency range		0 Hz to 18 GHz
Switching time		< 15 ms
Life		5 000 000 cycles
Insertion loss	0 Hz to 3 GHz	≤ 0.20 dB, without cable loss
	3 GHz to 8 GHz	≤ 0.30 dB, without cable loss
	8 GHz to 12.4 GHz	≤ 0.40 dB, without cable loss
	12.4 GHz to 18 GHz	≤ 0.50 dB, without cable loss

RF sample port switch, dual port, R&S®BBA-B142 option		
Switch type		2 × 2:1, mechanical
RF or detected sample ports	at desktop model or rack connection panel	N female
	switches	SMA female
Frequency range		0 Hz to 18 GHz
Switching time		< 10 ms
Life		10 000 000 cycles
RF sample signal level		max. 10 dBm
Insertion loss	0 Hz to 3 GHz	≤ 0.15 dB, without cable loss
	3 GHz to 8 GHz	≤ 0.20 dB, without cable loss
	8 GHz to 12.4 GHz	≤ 0.25 dB, without cable loss
	12.4 GHz to 18 GHz	≤ 0.35 dB, without cable loss

RF sample port switch, dual port, R&S®BBA-B146 option		
Switch type		2 × 6:1, mechanical
RF or detected sample ports	at rack cosnnection panel	N female
	switches	SMA female
Frequency range		0 Hz to 18 GHz
Switching time		< 10 ms
Life		5 000 000 cycles
RF sample signal level		max. 10 dBm
Insertion loss	0 Hz to 3 GHz	≤ 0.20 dB, without cable loss
	3 GHz to 8 GHz	≤ 0.30 dB, without cable loss
	8 GHz to 12.4 GHz	≤ 0.40 dB, without cable loss
	12.4 GHz to 18 GHz	≤ 0.50 dB, without cable loss

RF switching specifications – output

RF output switch, R&S®BBA-B120 option		
Switch type		2:1 or 1:2, mechanical
RF output port		N female
Frequency range		0 Hz to 12.4 GHz
Switching time		< 15 ms
Life		1 000 000 cycles
Average forward RF power	0 Hz to 1 GHz	max. 700 W × $1/\sqrt{VSWR}$
	1 GHz to 2 GHz	max. 500 W × $1/\sqrt{VSWR}$
	2 GHz to 3 GHz	max. 400 W × $1/\sqrt{VSWR}$
	3 GHz to 8 GHz	max. 250 W × $1/\sqrt{VSWR}$
	8 GHz to 12.4 GHz	max. 200 W × $1/\sqrt{VSWR}$
Insertion loss	0 Hz to 1 GHz	≤ 0.15 dB, without cable loss
	1 GHz to 2 GHz	≤ 0.20 dB, without cable loss
	2 GHz to 3 GHz	≤ 0.25 dB, without cable loss
	3 GHz to 8 GHz	≤ 0.35 dB, without cable loss
	8 GHz to 12.4 GHz	≤ 0.50 dB, without cable loss

RF output switch, R&S®BBA-B121 option		
Switch type		2:2, mechanical
RF output port		$^{7}/_{16}$ DIN female
Frequency range		0 Hz to 6 GHz
Switching time		< 100 ms
Life		≥ 500 000 cycles
Average forward RF power	0 Hz to 1 GHz	max. 2.0 kW × $1/\sqrt{VSWR}$
	1 GHz to 2 GHz	max. 1.4 kW × $1/\sqrt{VSWR}$
	2 GHz to 3 GHz	max. 1.1 kW × $1/\sqrt{VSWR}$
	3 GHz to 4 GHz	max. 1.0 kW × $1/\sqrt{VSWR}$
	4 GHz to 5 GHz	max. 0.9 kW × $1/\sqrt{VSWR}$
	5 GHz to 6 GHz	max. 0.8 kW × $1/\sqrt{VSWR}$
Insertion loss	0 Hz to 2 GHz	≤ 0.05 dB, without cable loss
	2 GHz to 5 GHz	≤ 0.10 dB, without cable loss
	5 GHz to 6 GHz	≤ 0.15 dB, without cable loss

RF output switch, R&S®BBA-B122 option		
Switch type		2:2, mechanical
RF output port		$^{7}/_{8}$" EIA
Frequency range		0 Hz to 3.5 GHz
Switching time		< 120 ms
Life		≥ 250 000 cycles
Average forward RF power	0 Hz to 0.1 GHz	max. 8 kW × $1/\sqrt{VSWR}$
	0.1 GHz to 0.23 GHz	max. 5 kW × $1/\sqrt{VSWR}$
	0.23 GHz to 0.86 GHz	max. 2.5 kW × $1/\sqrt{VSWR}$
	0.86 GHz to 2 GHz	max. 1.8 kW × $1/\sqrt{VSWR}$
	2 GHz to 3 GHz	max. 1.4 kW × $1/\sqrt{VSWR}$
	3 GHz to 3.5 GHz	max. 1.3 kW × $1/\sqrt{VSWR}$
Insertion loss	0 Hz to 1 GHz	≤ 0.03 dB, without cable loss
	1 GHz to 2 GHz	≤ 0.05 dB, without cable loss
	2 GHz to 3.5 GHz	≤ 0.20 dB, without cable loss

RF output switch, R&S®BBA-B123 option		
Switch type		2:2, mechanical
RF output port		1 5/8" EIA
Frequency range		0 Hz to 2 GHz
Switching time		< 120 ms
Life		≥ 250 000 cycles
Average forward RF power	0 Hz to 0.1 GHz	max. 19 kW × $1/\sqrt{VSWR}$
	0.1 GHz to 0.23 GHz	max. 12.7 kW × $1/\sqrt{VSWR}$
	0.23 GHz to 0.86 GHz	max. 6.6 kW × $1/\sqrt{VSWR}$
	0.86 GHz to 1.6 GHz	max. 4.8 kW × $1/\sqrt{VSWR}$
	1.6 GHz to 2 GHz	max. 4.3 kW × $1/\sqrt{VSWR}$
Insertion loss	0 Hz to 0.86 GHz	≤ 0.05 dB, without cable loss
	0.86 GHz to 2 GHz	≤ 0.10 dB, without cable loss

RF output switch, R&S®BBA-B126 option		
Switch type		6:1, mechanical
RF output port		N female
Frequency range		0 Hz to 12.4 GHz
Switching time		< 15 ms
Life		≥ 2 000 000 cycles
Average forward RF power	0 Hz to 1 GHz	max. 700 W × $1/\sqrt{VSWR}$
	1 GHz to 2 GHz	max. 500 W × $1/\sqrt{VSWR}$
	2 GHz to 3 GHz	max. 400 W × $1/\sqrt{VSWR}$
	3 GHz to 8 GHz	max. 250 W × $1/\sqrt{VSWR}$
	8 GHz to 12.4 GHz	max. 200 W × $1/\sqrt{VSWR}$
Insertion loss	0 Hz to 1 GHz	≤ 0.15 dB, without cable loss
	1 GHz to 2 GHz	≤ 0.20 dB, without cable loss
	2 GHz to 3 GHz	≤ 0.25 dB, without cable loss
	3 GHz to 8 GHz	≤ 0.35 dB, without cable loss
	8 GHz to 12.4 GHz	≤ 0.5 dB, without cable loss

Fast amplifier mute specifications

Fast amplifier mute, R&S®BBA-B130 option, for R&S®BBA150-Ax only above 3 MHz		
External mute signal		TTL
Mute on delay (amplifier switches to mute mode, RF turns off)		nom. < 8 µs
Mute off delay (amplifier leaves mute mode, RF turns on)	models with frequency band	
	from 9 kHz to 250 MHz	nom. < 2.5 ms
	from 4 kHz to 400 MHz	nom. < 2.5 ms
	from 0.69 GHz to 3.2 GHz	nom. < 4 µs
	from 2.5 GHz to 6.0 GHz	nom. < 4 µs
	from 80 MHz to 1.0 GHz	nom. < 15 µs

Ordering information

R&S®BBA150 single band power amplifiers

Frequency band from 9 kHz to 250 MHz

Designation	Type	Configuration No.
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

Designation	Type	Configuration No.
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

Designation	Type	Configuration No.
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

Designation	Type	Configuration No.
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

Designation	Type	Configuration No.
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, 12 HU rack model	R&S®BBA150	BBA150-E400

Accessories supplied: power cord, user manual on CD.

R&S®BBA150 twin band power amplifiers

Frequency bands 2 × from 9 kHz to 250 MHz

Designation	Type	Configuration No.
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 × from 80 MHz to 1 GHz

Designation	Type	Configuration No.
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 × from 0.69 GHz to 3.2 GHz

Designation	Type	Configuration No.
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 × from 2.5 GHz to 6 GHz

Designation	Type	Configuration No.
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

Frequency bands from 9 kHz to 250 MHz and 80 MHz to 1 GHz

Designation	Type	Configuration No.
75 W/70 W, air-cooled, 4 HU desktop model	R&S®BBA150	BBA150-A75BC70
75 W/125 W, air-cooled, 4 HU desktop model	R&S®BBA150	BBA150-A75BC125
75 W/250 W, air-cooled, 4 HU desktop model	R&S®BBA150	BBA150-A75BC250
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/160 W, air-cooled, 4 HU desktop model	R&S®BBA150	BBA150-A125BC160
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 GHz and 0.69 GHz to 3.2 GHz

Designation	Type	Configuration No.
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 2.5 GHz to 6.0 GHz

Designation	Type	Configuration No.
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.

Options

Designation	Type	Order No.
GPIB remote control	R&S®BBA-B101	5355.8250.02 [39]
PoE switch	R&S®BBA-B102	5355.8243.30
Optical Ethernet remote control	R&S®BBA-B105	5355.8266.03
RF input switch (1:2 or 2:1, N)	R&S®BBA-B110	5355.8866.02 [39]
RF input switch (1:6, N)	R&S®BBA-B116	5355.8950.12
RF output switch (2:1 or 1:2, N)	R&S®BBA-B120	5355.8795.02 [39]
RF output switch (2:2, $^{7}/_{16}$ DIN)	R&S®BBA-B121	5355.8895.12 [39]
RF output switch (2:2, $^{7}/_{8}$" EIA)	R&S®BBA-B122	5355.8989.12
RF output switch (2:2, 1 $^{5}/_{8}$" EIA)	R&S®BBA-B123	5355.8943.12
RF output switch (6:1, N)	R&S®BBA-B126	5355.8995.12
Fast amplifier mute, for R&S®BBA150-Ax above 3 MHz only	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 (2 × 2 :1, N)	R&S®BBA-B142	5355.8872.02 [39]
Sample port switch (2 × 6:1, N)	R&S®BBA-B146	5355.8972.02
Transparent I/O	R&S®BBA-B160	5355.8889.02

Accessories

Designation	Type	Order No.
Rackmounting brackets (pair)	R&S®ZR1-RA02	5355.8208.00
Mounting rails, for R&S®BBA150 with transport lock (pair)	R&S®ZR1-SLR03	5355.8220.12
Mounting rails, for R&S®BBA150 without transport lock (pair)	R&S®ZR1-SLR03	5355.8220.13
Mounting rails, for other equipment (pair)	R&S®ZR1-SLR02	5353.9565.02
AC power cord (German plug)	R&S®ZR1-PSEA	5355.8514.02
AC power cord (without plug)	R&S®ZR1-PSEA	5355.8514.03
AC power cord (NEMA 5-15 US plug)	R&S®ZR1-PSEA	5355.8514.04
AC power cord (NEMA L5-30 US plug)	R&S®ZR1-PSEA	5355.8514.05
AC power cord (JIS C8303 Japanese plug)	R&S®ZR1-PSEA	5355.8514.06
AC power cord (PRC3/16 Chinese plug)	R&S®ZR1-PSEA	5355.8514.07
AC power cord (BS13/13 British plug)	R&S®ZR1-PSEA	5355.8514.08
AC power cord (ZA3 South African, Indian plug)	R&S®ZR1-PSEA	5355.8514.09
AC power cord (12G Swiss plug)	R&S®ZR1-PSEA	5355.8514.10
AC power cord (BR/3/20 Brazil plug)	R&S®ZR1-PSEA	5355.8514.11
Operating manual, German, printed version	R&S®BBA-MA	5355.8120.03
Operating manual, English, printed version	R&S®BBA-MA	5355.8120.02
Rack wheels	R&S®ZR1-RW	5353.9707.03
Rubber wheels, for racks up to 20 HU	R&S®ZR1-RW	5353.9707.04

[39] Variant of order number depends on system configuration.

Service

Service level agreements

Rohde & Schwarz offers maintenance and support services to maximize and protect the investment of customers' Rohde & Schwarz products. Details are given in the "Service Levels Description for Rohde & Schwarz Broadband Amplifiers" document (PD 3607.6467.92).

Calibration information

An optional calibration can be ordered for the R&S®BBA150. Note that the simple acceptance rule is selected for the declaration of conformity (cf. ILAC-G8:09/2019, section 4.2.1).

System upgrades

Upgrades in frequency band and/or RF output power are available on request.

Service at Rohde&Schwarz
You're in great hands
- Worldwide
- Local and personalized
- Customized and flexible
- Uncompromising quality
- Long-term dependability

Rohde&Schwarz
The Rohde&Schwarz technology group is among the trailblazers when it comes to paving the way for a safer and connected world with its leading solutions in test&measurement, technology systems and networks&cybersecurity. Founded more than 90 years ago, the group is a reliable partner for industry and government customers around the globe. The independent company is headquartered in Munich, Germany and has an extensive sales and service network with locations in more than 70 countries.

www.rohde-schwarz.com

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

More Rohde&Schwarz certificates

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

Rohde&Schwarz customer support
www.rohde-schwarz.com/support

R&S® is a registered trademark of Rohde&Schwarz GmbH&Co. KG
Trade names are trademarks of the owners
PD 3606.7247.22 | Version 29.00 | March 2026 (ch)
R&S®BBA150 Broadband Amplifier
Data without tolerance limits is not binding | Subject to change
© 2016 - 2026 Rohde&Schwarz | 81671 Munich, Germany