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Test & Measurement

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- disposal

Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

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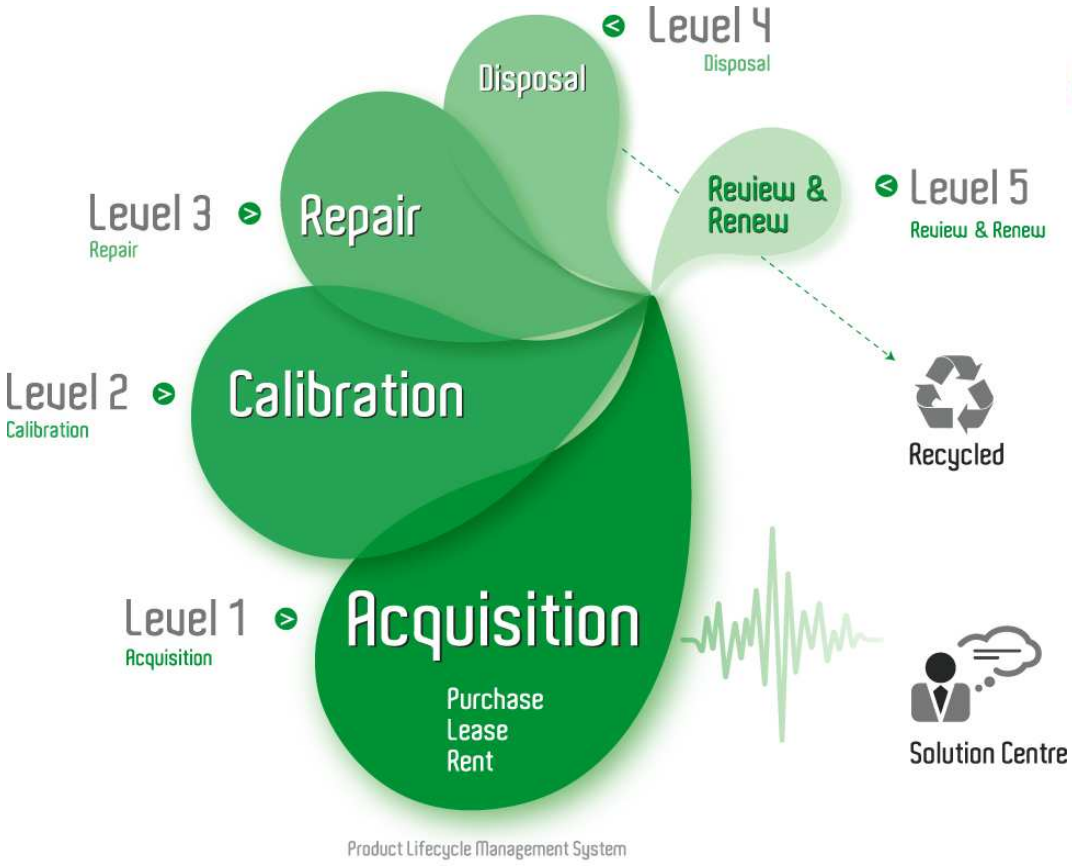

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R&S®BBA100
Broadband Amplifier
Specifications

70 Years of Driving Innovation

ROHDE&SCHWARZ

CONTENTS

Specifications apply under the following conditions: 15 minutes warm-up time at ambient temperature, specified environmental conditions met, calibration cycle adhered to, and all internal automatic adjustments performed. "Typical values" are designated with the abbreviation "typ.". These values are verified during the final test but are not assured by Rohde & Schwarz. "Nominal values" are design parameters that are not assured by Rohde & Schwarz. These values are verified during product development but are not specifically tested during production.

Rohde & Schwarz equipment is designed for reliable operation up to an altitude of 3000 m above sea level, and for transport up to an altitude of 4600 m above sea level.

Data without tolerance limits is not binding.

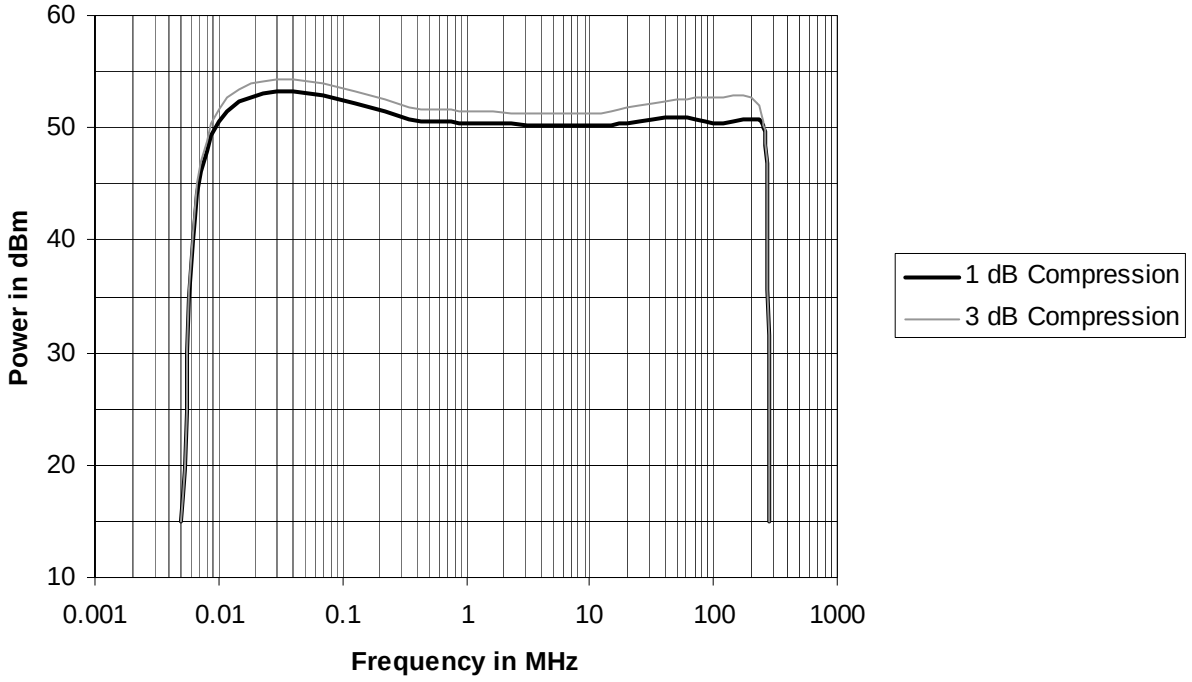
RoHS Europe, Directive 2002/95/EC: Equipment category 9, fulfilled without any exceptions.

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.

Frequency band 9 kHz to 250 MHz

Power class 125 W

Frequency response



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal power		125 W
Power output	at 3 dB compression	200 W, limited by power supply
	at 1 dB compression	125 W
Power gain	at 1 dB, without RF input switch module	55 dB
	at 1 dB, with RF input switch module	51 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 125 W	> –20 dBc
Third order intercept point (TOI)		typ. 58 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 22 kg (approx. 48 lb)
	with typical options	approx. 23 kg (approx. 50 lb)

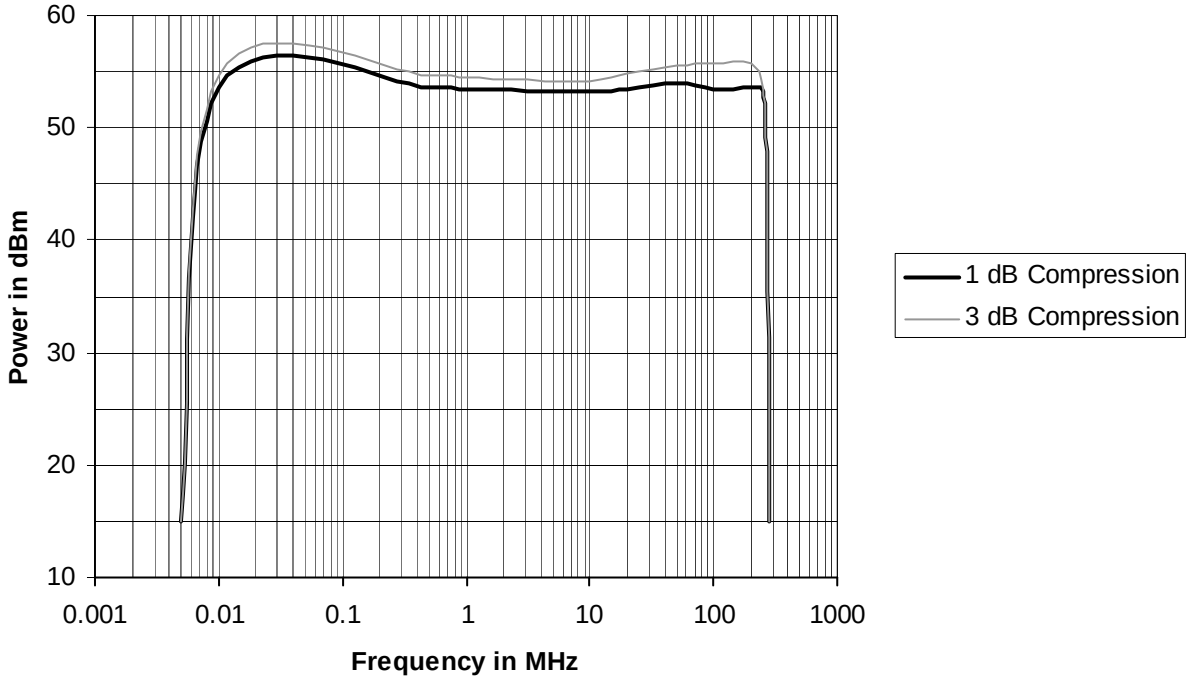
RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial N female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 7.7 A
	at 230 V	< 3.7 A
Power consumption		< 840 VA

Power class 250 W

Frequency response



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal power		250 W
Power output	at 3 dB compression	350 W, limited by power supply
	at 1 dB compression	250 W
Power gain	at 1 dB, without RF input switch module	58 dB
	at 1 dB, with RF input switch module	54 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 250 W	> –20 dBc (at 80 MHz ± 10 MHz for 3rd harmonic > –15 dBc)
Third order intercept point (TOI)		typ. 60 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 25 kg (approx. 55 lb)
	with typical options	approx. 26 kg (approx. 57 lb)

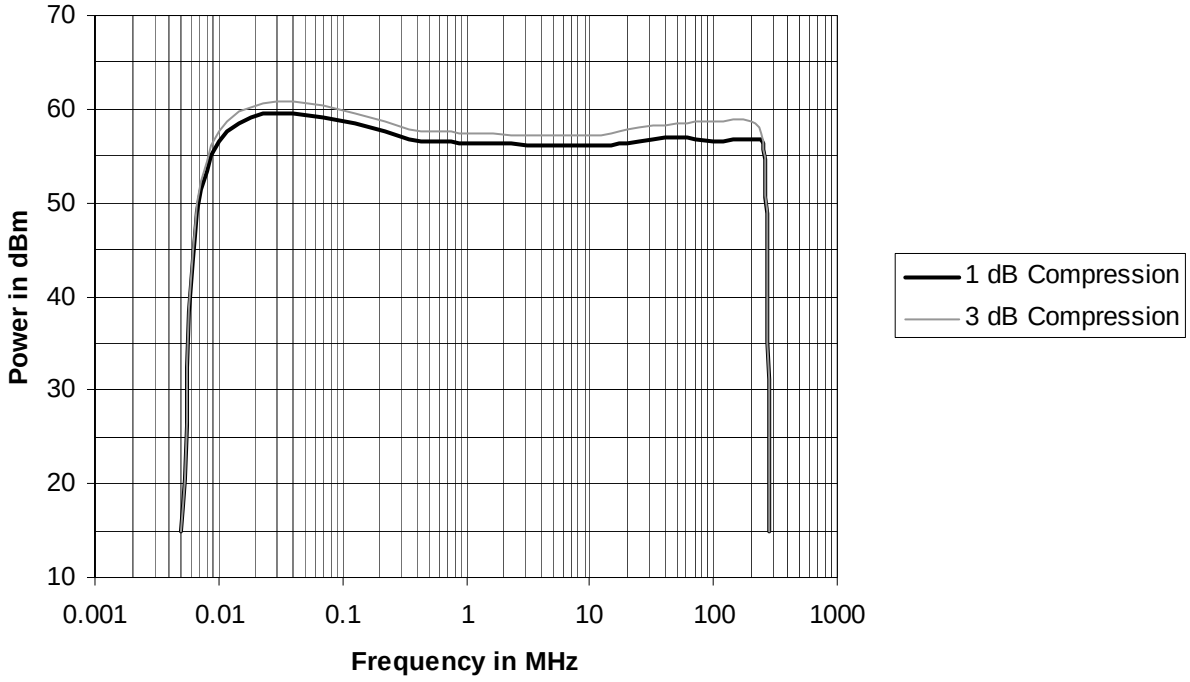
RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial N female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 14.2 A
	at 230 V	< 6.8 A
Power consumption		< 1560 VA

Power class 500 W

Frequency response



RF specifications

Main parameters		
Frequency range		9 kHz to 250 MHz instantaneously
Nominal power		500 W
Power output	at 3 dB compression	700 W, limited by power supply
	at 1 dB compression	500 W
Power gain	at 1 dB, without RF input switch module	61 dB
	at 1 dB, with RF input switch module	57 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 500 W	> –20 dBc (at 80 MHz ± 10 MHz for 3rd harmonic > –15 dBc)
Third order intercept point (TOI)		typ. 63 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 37 kg (approx. 81 lb)
	with typical options	approx. 38 kg (approx. 83 lb)

RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial 7/16 DIN female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

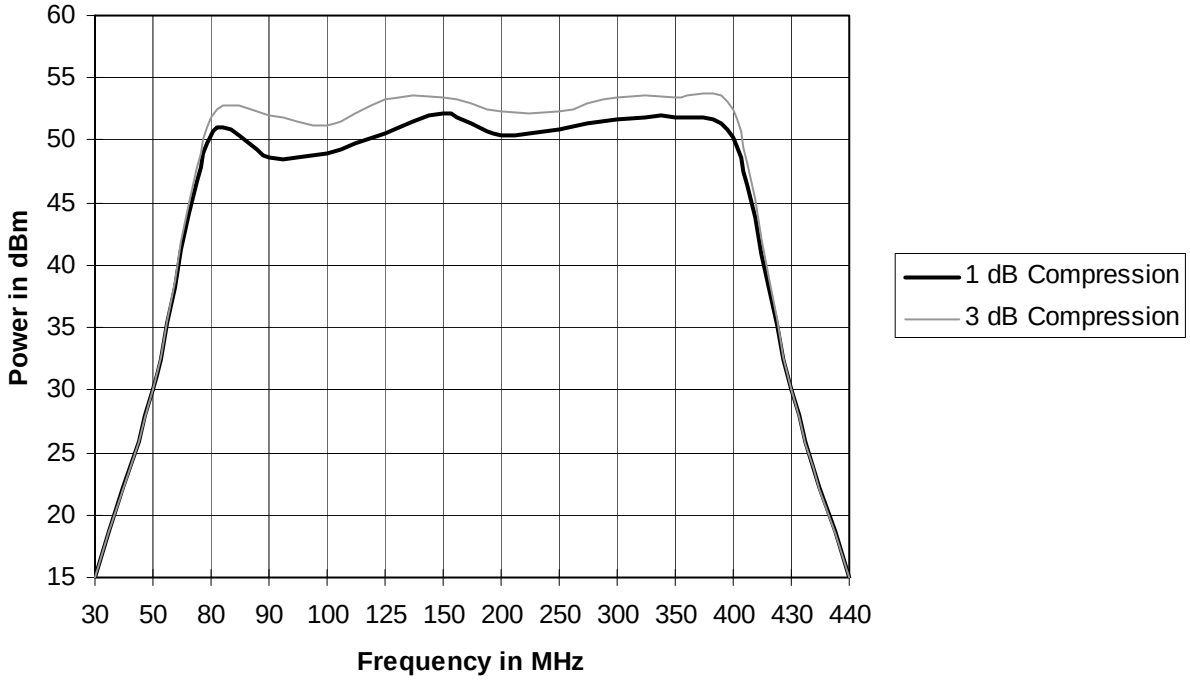
Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 27.5 A
	at 230 V	< 13.0 A
Power consumption		< 3000 VA

Frequency band 80 MHz to 400 MHz

Power class 125 W

Frequency response



RF specifications

Main parameters		
Frequency range		80 MHz to 400 MHz instantaneously
Nominal power		125 W
Power output	at 3 dB compression	200 W, limited by power supply
	at 1 dB compression	125 W
Power gain	at 1 dB, without RF input switch module	55 dB
	at 1 dB, with RF input switch module	51 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 125 W	> –20 dBc
Third order intercept point (TOI)		typ. 58 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 22 kg (approx. 48 lb)
	with typical options	approx. 23 kg (approx. 50 lb)

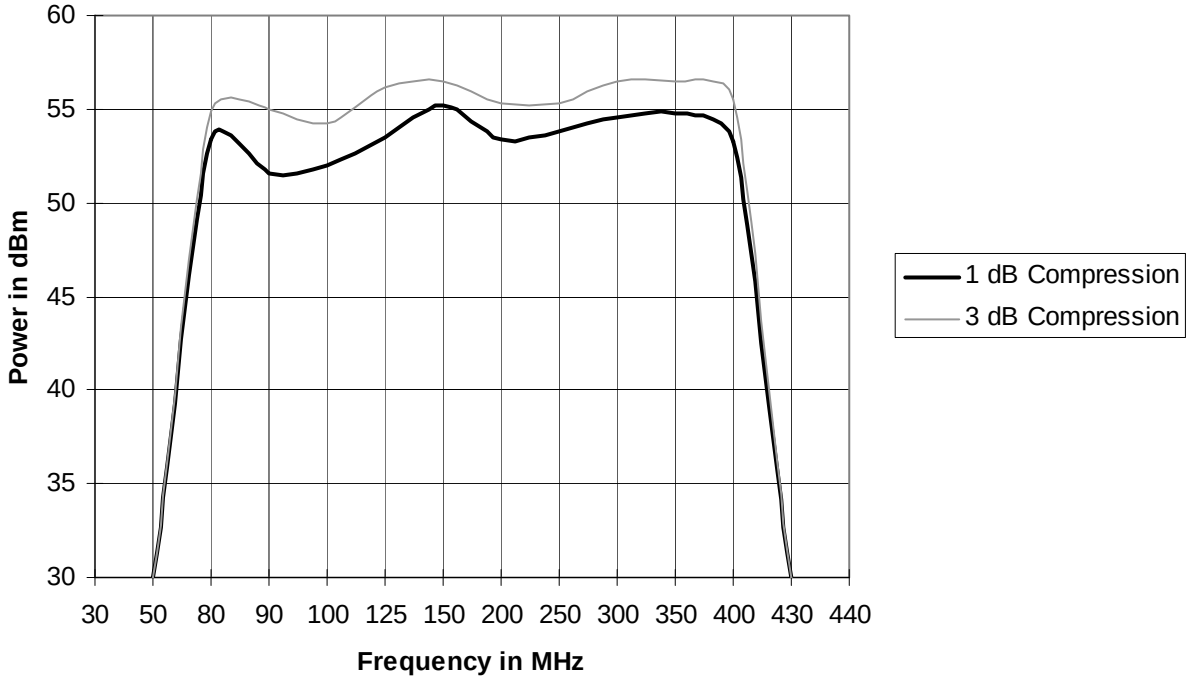
RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial N female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 7.7 A
	at 230 V	< 3.7 A
Power consumption		< 840 VA

Power class 250 W

Frequency response



RF specifications

Main parameters		
Frequency range		80 MHz to 400 MHz instantaneously
Nominal power		250 W
Power output	at 3 dB compression	350 W, limited by power supply
	at 1 dB compression	250 W
Power gain	at 1 dB, without RF input switch module	58 dB
	at 1 dB, with RF input switch module	54 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 250 W	> –20 dBc
Third order intercept point (TOI)		typ. 60 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 25 kg (approx. 55 lb)
	with typical options	approx. 26 kg (approx. 57 lb)

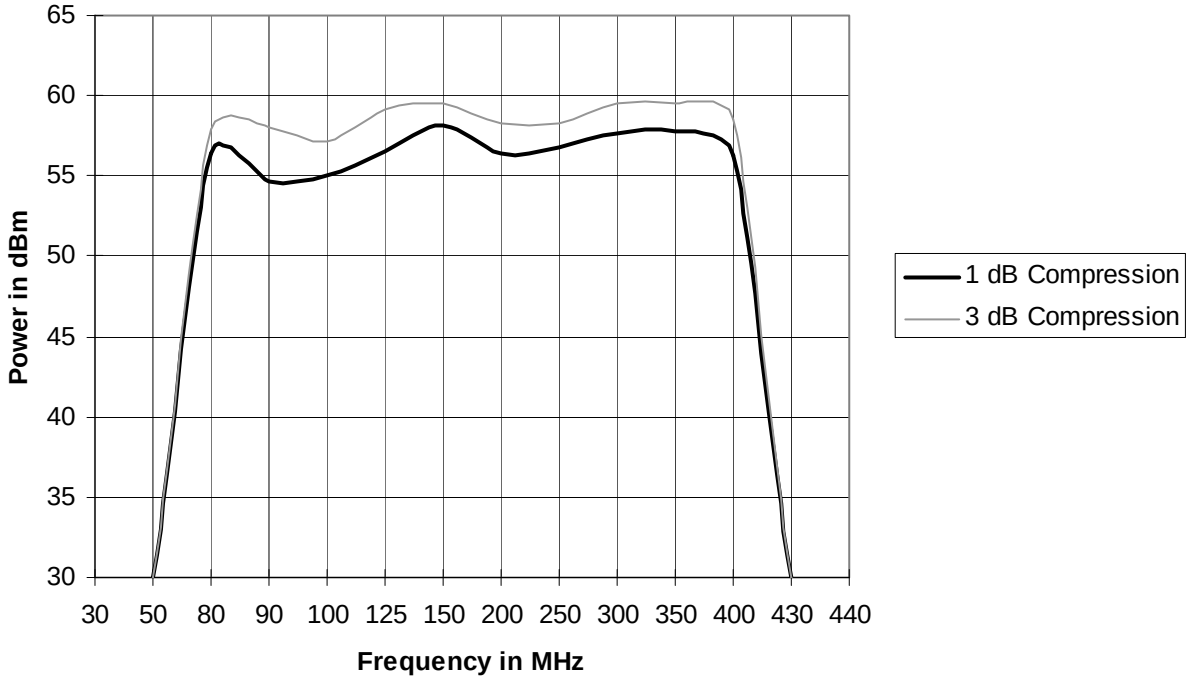
RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial N female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 14.0 A
	at 230 V	< 6.8 A
Power consumption		< 1560 VA

Power class 500 W

Frequency response



RF specifications

Main parameters		
Frequency range		80 MHz to 400 MHz instantaneously
Nominal power		500 W
Power output	at 3 dB compression	700 W, limited by power supply
	at 1 dB compression	500 W
Power gain	at 1 dB, without RF input switch module	61 dB
	at 1 dB, with RF input switch module	57 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 500 W	> –20 dBc
Third order intercept point (TOI)		typ. 63 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 37 kg (approx. 81 lb)
	with typical options	approx. 38 kg (approx. 83 lb)

RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial 7/16 DIN female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

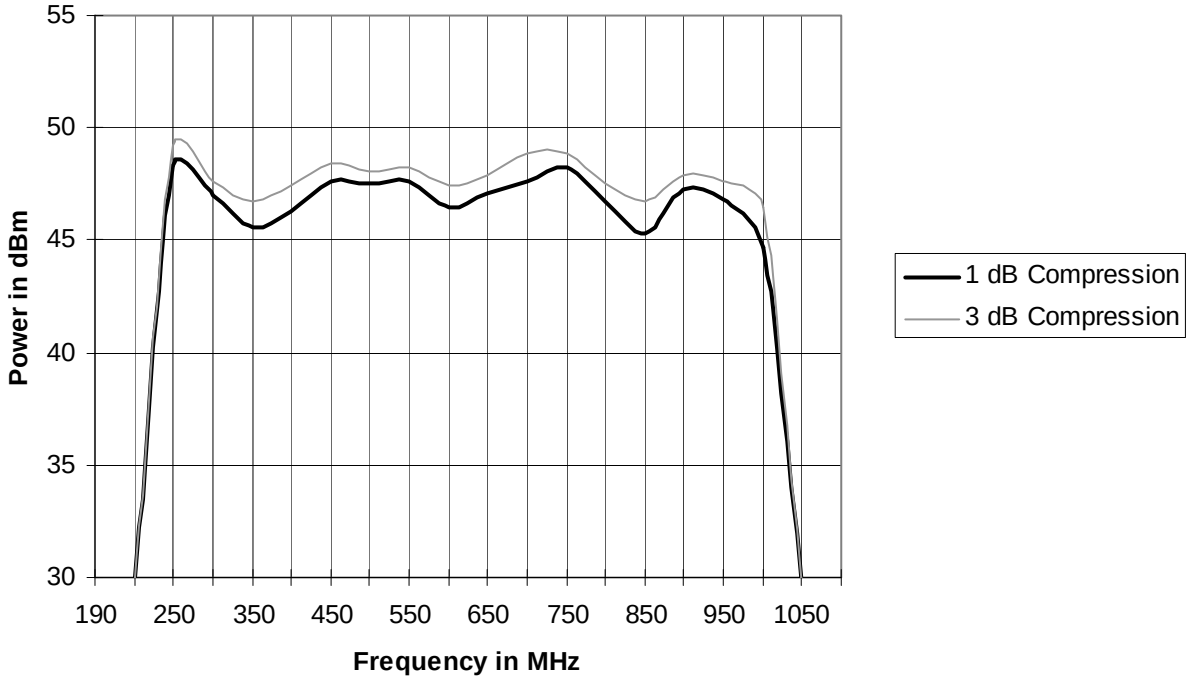
Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 27.5 A
	at 230 V	< 13.0 A
Power consumption		< 3000 VA

Frequency band 250 MHz to 1 GHz

Power class 70 W

Frequency response



RF specifications

Main parameters		
Frequency range		250 MHz to 1 GHz instantaneously
Nominal power		70 W
Power output	at 3 dB compression	100 W, limited by power supply
	at 1 dB compression	70 W
Power gain	at 1 dB, without RF input switch module	52 dB
	at 1 dB, with RF input switch module	48 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 70 W	> –20 dBc
Third order intercept point (TOI)		typ. 55 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 21 kg (approx. 46 lb)
	with typical options	approx. 22 kg (approx. 48 lb)

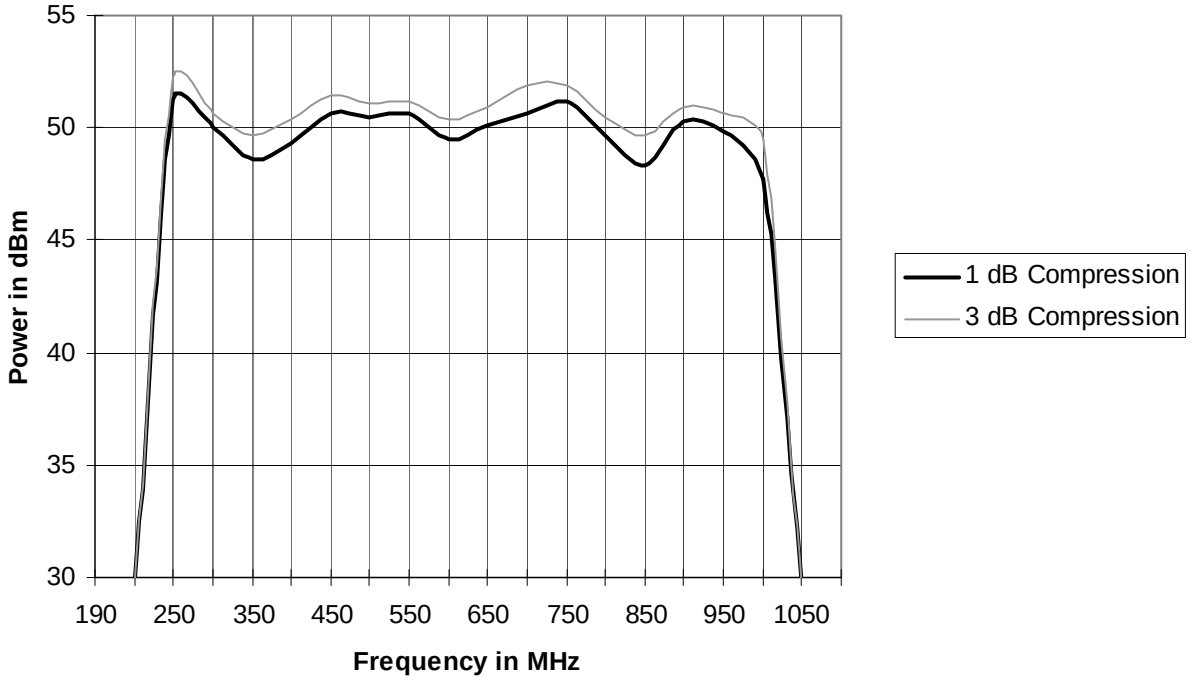
RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial N female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 4.8 A
	at 230 V	< 2.3 A
Power consumption		< 525 VA

Power class 125 W

Frequency response



RF specifications

Main parameters		
Frequency range		250 MHz to 1 GHz instantaneously
Nominal power		125 W
Power output	at 3 dB compression	180 W, limited by power supply
	at 1 dB compression	125 W
Power gain	at 1 dB, without RF input switch module	55 dB
	at 1 dB, with RF input switch module	51 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 125 W	> –20 dBc
Third order intercept point (TOI)		typ. 58 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
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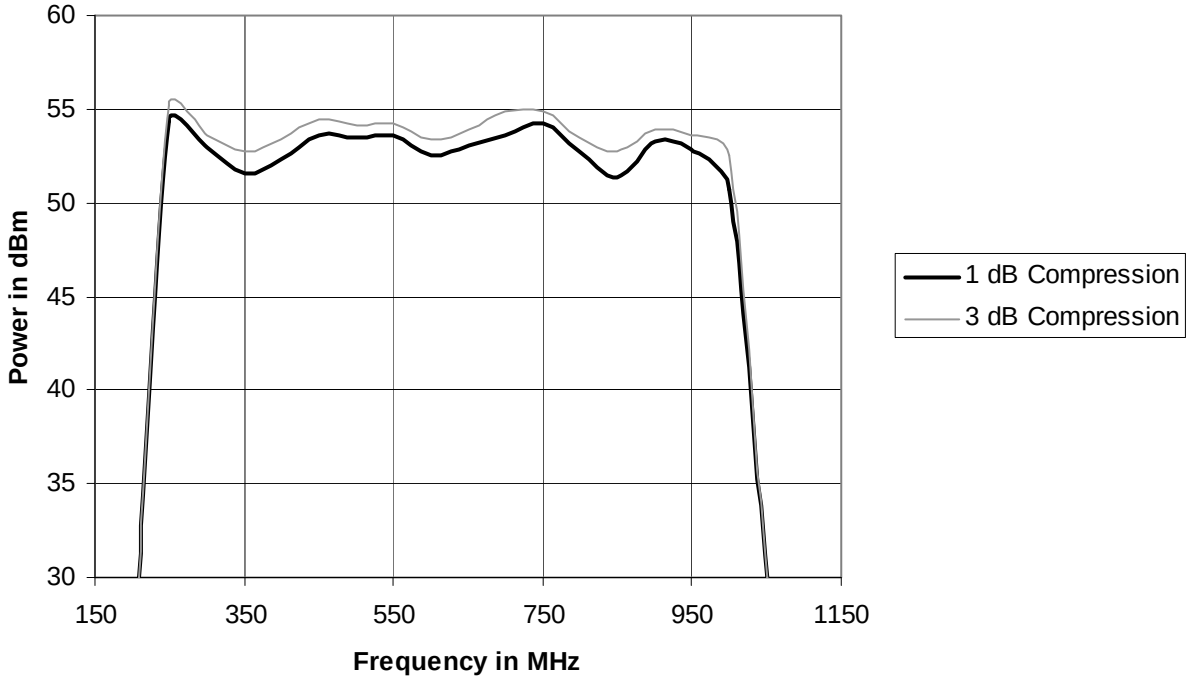
RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial N female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 7.7 A
	at 230 V	< 3.7 A
Power consumption		< 840 VA

Power class 250 W

Frequency response



RF specifications

Main parameters		
Frequency range		250 MHz to 1 GHz instantaneously
Nominal power		250 W
Power output	at 3 dB compression	350 W, limited by power supply
	at 1 dB compression	250 W
Power gain	at 1 dB, without RF input switch module	58 dB
	at 1 dB, with RF input switch module	54 dB
Nominal output load		50 Ω
Gain variation	at 1 dB compression	typ. ±1.5 dB
Gain adjustment range		> 20 dB
Harmonics	at 250 W	> –20 dBc
Third order intercept point (TOI)		typ. 61 dBm
Spurious		max. –70 dBc, typ. –80 dBc
Noise figure	at maximum gain, without RF input switch module	typ. < 11 dB
	at maximum gain, with RF input switch module	typ. < 15 dB
Modulation capability		AM, FM, φM or PM

Input		
Input impedance		50 Ω
Input level for nominal output power	without RF input switch module	–4 dBm
	with RF input switch module	0 dBm
Input VSWR	at 50 Ω	max. 2:1
Input return loss	at 50 Ω	< 10 dB
Input maximum level		+15 dBm
Input mismatch tolerance		100 %

Output		
Output impedance		50 Ω
Output VSWR	at 50 Ω	max. 2:1
Output mismatch tolerance		100 %
Output power	at maximum VSWR	100 %
Output mismatch protection, VSWR	limited by software	10:1

Mechanical specifications

System size		
Dimensions	W × H × D overall, incl. fans, handholds and stand	430 mm × 250 mm × 710 mm (16.93 in × 9.84 in × 27.95 in)
	for rackmounting	19" 1/1, 5 HU
Weight	base unit	approx. 30 kg (approx. 65 lb)
	with typical options	approx. 31 kg (approx. 67 lb)

RF and sample connectors		
RF input port		coaxial N female
RF output port		coaxial 7/16 DIN female
RF sample port	forward output power, option	SMA female
	reflected output power, option	SMA female
Detected sample port	forward output power, option	SMA female
	reflected output power, option	SMA female

Electrical specifications

Supply voltage AC		
Operating voltage range		100 V to 240 V AC, 50/60 Hz, single phase
Permissible voltage variation		90 V to 264 V AC, 47 Hz to 63 Hz
Nominal current	at 110 V	< 14.2 A
	at 230 V	< 6.8 A
Power consumption		< 1560 VA

General data

Cooling specifications

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

Control specifications

Remote control		
Remote control GPIB/IEEE 488	incl. one GPIB or ETH free of charge	IEC 60625-2 24 pin connector
Remote control Ethernet (back)	incl. one GPIB or ETH free of charge	RJ-45, 10/100 Mbit/s, auto negotiation, half/full duplex
Remote control optical Ethernet	option	FDDI PMD, 100 Mbit/s, duplex SC connector

Local MMI		
Local graphical display		
Display resolution		320 × 240 pixel
Display colors		16.7 million
Manual controls	lever key	mains switch
	operate push-buttons	system ON/OFF standby/operate local/remote
	menu push buttons	arrow up, down, left, right ok menu back home function status
LED status information	per amplifier system	power ON/OFF system interlock standby/operate local/remote mute ready
	per amplifier module	power supply RF forward RF reflected temperature

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

Environmental specifications

Temperature loading	operating temperature range	0 °C to +50 °C
	permissible temperature range	–10 °C to +55° C
	storage temperature range	–30 °C to +70 °C
Damp heat		max. +40 °C at 95 % rel. humidity, not condensed
Altitude	operating altitude	up to 3000 m
	storage altitude	up to 4600 m
Mechanical resistance test values	vibration, sinusoidal	5 Hz to 55 Hz displacement 0.15 mm const. > 55 Hz to 150 Hz acceleration 0.5 g in line with EN 60068-2-6
	vibration, random	effective acceleration ≤ 1.9 g 10 Hz to 300 Hz acceleration density 0.01 g^2/Hz > 300 Hz to 500 Hz acceleration density 0.003 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-810
Calibration interval		no calibration needed
Electromagnetic compatibility	overall	in line with EN 61326-1, industrial area, performance characteristic A
	electromagnetic fields	≤ 10 V/m in line with IEC 61000-4-3
	surge test line to ground	≤ 2 kV in line with IEC 61000-4-5
	surge test line to line	≤ 1 kV in line with IEC 61000-4-5
	bursts	≤ 2 kV in line with IEC 61000-4-4
Electromagnetic emissions	overall	in line with EN 55011 (CISPR 11), industrial area, ISM group 1 (signal generators)
	conducted emissions	in line with EN 55011, class A (CISPR 11)
	radiated emissions	limits of FCC047 cfr18 and limits of EN 55011 class A (CISPR 11) exceeded, equipment for use in shielded areas only (shielding +12 dB for FCC047 or +20 dB for EN 55011 necessary)
Electrical safety		in line with EN 61010-1 UL 61010-1 (ed. 2)

Protection

RF		
Input overdrive	without RF input switch module	max. +15 dBm, input blanking at approx. > –2 dBm
	with RF input switch module	max. +15 dBm, input blanking at approx. +2 dB over $P_{in\ nom}$
Load VSWR	limited by software	10 :1
Safety interlock		3 configurable circuits
Input protection against BIAS voltage	option	DC block level ≤ 50 V DC

Power supply		
Transient voltage compatibility		category II in line with IEC 60364-4-443
Maximum transient surge current	surge waveform 8/50 µs	≤ 6500 A
Short-circuit breaking capacity		automatic all-pole circuit breaker 32 A

Miscellaneous		
Thermal overload		+85 °C shutdown

Ordering information

We recommend that you ask your local Rohde & Schwarz expert to find the solution that is optimally suited to your needs.

R&S®BBA100 single-band power amplifiers

Frequency range 9 kHz to 250 MHz

Designation	Type	Order No.
9 kHz to 250 MHz, 125 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.2006.02
9 kHz to 250 MHz, 250 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.2006.03
9 kHz to 250 MHz, 500 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.2006.04

Frequency range 80 MHz to 400 MHz

Designation	Type	Order No.
80 MHz to 400 MHz, 125 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.3002.02
80 MHz to 400 MHz, 250 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.3002.03
80 MHz to 400 MHz, 500 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.3002.04

Frequency range 250 MHz to 1 GHz

Designation	Type	Order No.
250 MHz to 1 GHz, 70 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.4009.02
250 MHz to 1 GHz, 125 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.4009.03
250 MHz to 1 GHz, 250 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.4009.04

R&S®BBA100 multiband power amplifiers

The example configurations listed below are merely a selection of possible configurations. All frequency ranges and power classes can be combined as desired. Please ask your local Rohde & Schwarz expert about your specific solution.

Frequency range 9 kHz to 1 GHz

Designation	Type	Order No.
9 kHz to 250 MHz/125 W, 80 MHz to 400 MHz/250 W, 250 MHz to 1 GHz/125 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.8004.02
9 kHz to 250 MHz/250 W, 250 MHz to 1 GHz/125 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.8010.02
9 kHz to 250 MHz/500 W, 250 MHz to 1 GHz/250 W, air-cooled		
5 HU base unit and 5 HU extension unit both installed in a rack with following accessories: power cord, user manual on CD	R&S®BBA100	5354.8027.02

Frequency range 80 MHz to 1 GHz

Designation	Type	Order No.
80 MHz to 400 MHz/250 W, 250 MHz to 1 GHz/125 W, air-cooled		
5 HU base unit with following accessories: power cord, user manual on CD	R&S®BBA100	5354.8033.02

Options

A wide range of racks and rack accessories is available for installation of the amplifier system in a rack.

Designation	Type	Order No.
GPIB Remote Control	R&S®BBA-K101	5353.8417.02
Ethernet Remote Control	R&S®BBA-K103	5353.8430.02
Optical Ethernet Remote Control	R&S®BBA-B104	5353.8600.02
RF Input Switch	R&S®BBA-B122	5353.9320.02
DC Block Input Protection	R&S®BBA-B132	5353.9236.02
RF Forward/RF Reflected Sample Ports	R&S®BBA-B140	5353.9213.02
Detected Forward/Detected Reflected Sample Ports	R&S®BBA-B141	5353.9220.02

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Rohde&Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established 75 years ago, Rohde&Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

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Certified Quality System
ISO 9001

Certified Environmental System
ISO 14001

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