

200 watt power amplifier

Features

- RF input power ≤ 10 dBm
- RF output power above 53 dBm
- Small signal gain typ. 48 dB
- High effective class AB mode
- Reverse power protection with isolator
- 50 Ω system

Optional

- Measurement of load matching in operation (hot S-parameter measurement)



Fig. 1: PA-200.3 power amplifier
(Figure can differ from original)

Application

The PA-200.3 power amplifier is perfectly suitable for designing 50 Ω microwave power based applications within the ISM frequency range of 2.4 to 2.5 GHz.

The compact design of the PA-200.3 allows you to be flexible in use. The principle schematic is shown in Fig. 1.

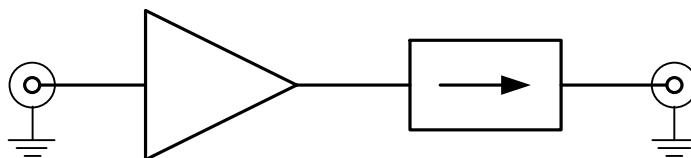
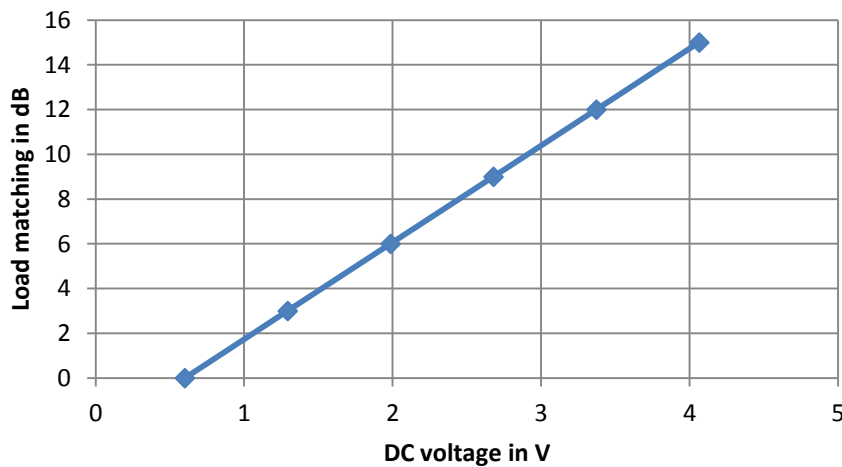


Fig. 2: Principal schematic of the PA-200.3 amplifier including isolator

Product Description

The compact designed PA-200.3 is an amplifier for designing 50 Ω based microwave applications within the nominal ISM frequency range of 2.4 to 2.5 GHz. With an integrated isolator, this module enables an operation under mismatched conditions. The class AB mode design results in a high efficiency of over 40 % in all operational conditions.

Optionally, directional couplers with a directivity of over 20 dB can be implemented to measure the load matching during operation (so called hot S-parameter measurement). In this case, a DC voltage proportional to the actual load matching is provided (Tab. 1).



Tab. 1: Load matching versus corresponding DC voltage

Specifications

Parameter	Min	Typ	Max	Unit	Remark
Frequency	2.4		2.5	GHz	
Input power		6	10	dBm	
Output power @ 1dB GCP		53		dBm	CW operation, 2.45 GHz
Output power saturated		53.9		dBm	pulsed operation, 10% duty cycle (10 μs pulse width), 2.45 GHz, @ 3dB GCP
Efficiency	40	43		%	CW operation, 2.45 GHz
Gain		48		dB	small signal
Input RL		10		dB	
Output RL		20		dB	

Electrical specification

Power supply: 110 / 230 VAC
 Supply frequency: 50 / 60 Hz
 Power dissipation: 600 W

Physical specification

Size (H x W x D): 185 x 345 x 375 (mm)
 Weight: 9.5 kg

Typical performance

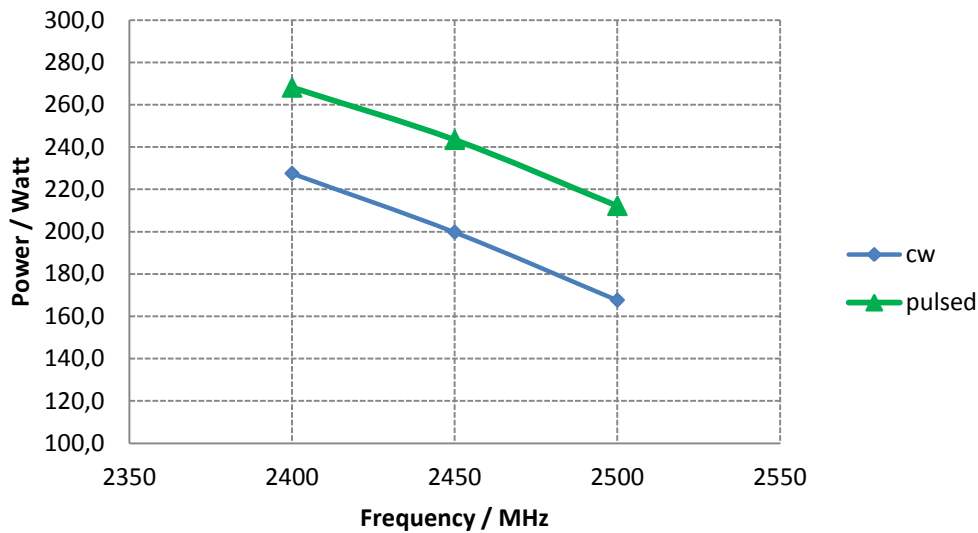


Fig. 3: Output power for CW and pulsed signals over frequency range (input power of 6 dBm)

Order information

Model: PA-200.3
 PA-200.3-H (with Hot S-parameter measurement)

Warranty

2 years warranty from date of shipment

Contact information

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