

Power Amplifier

WR-4.3/210-230GHz/13.5dB Gain/20dBm Psat

Model: TMPA-210230-1320-04

TMPA-210230-1320-04 is a power amplifier with a typical small signal gain of 13.5 dB and a nominal Psat of 20 dBm across the frequency range of 210 to 230 GHz. The DC power requirement for the amplifier is +6 VDC/1.350 A. The input and output port configuration offers an inline structure with WR-4.3 waveguides and UG-387/U-M antcocking flanges.

Features:

- Frequency range: 210-230GHz
- Gain: 13.5dB Typ
- Output Power Psat: 20dBm Typ
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	210		230	GHz
Small Signal Gain	9.5	13.5	17	dB
Output Psat	19	20	20.3	dBm
Input VSWR		1.5		:1
Output VSWR		2.5		:1
DC Voltage	5	6	8	V DC
DC Supply Current		1.35		A

Mechanical Specifications:

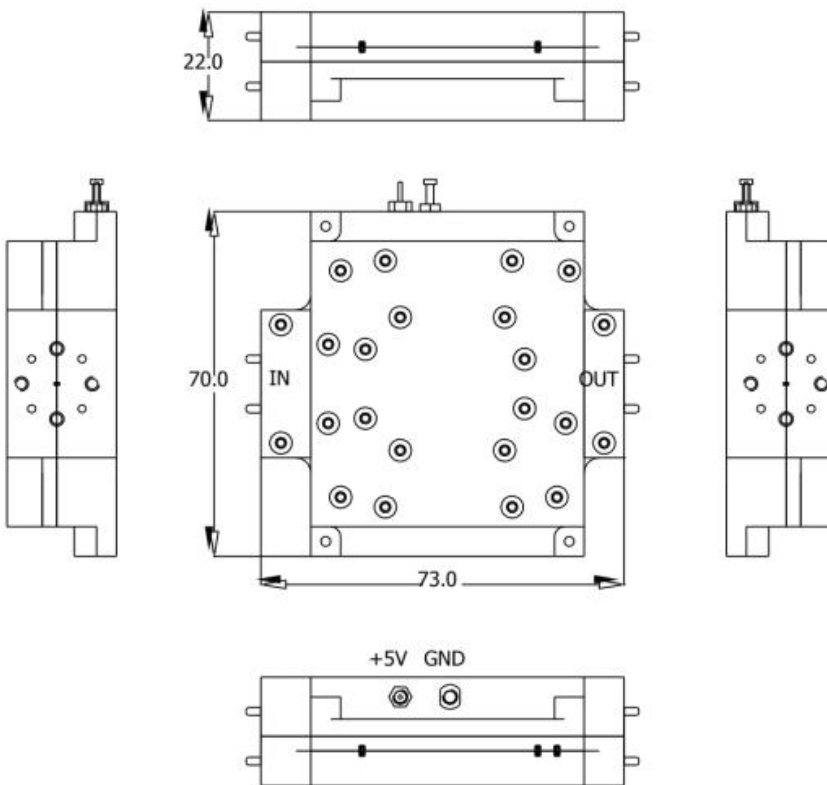
Parameter	Value	Units
Input /Output Connector	WR-4.3/UG-387/U	
DC Bias	Solder Pin	
Size	73*70*22	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+8 V
RF Input Power	+17 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



*****Heat Sink Required During Operation**



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

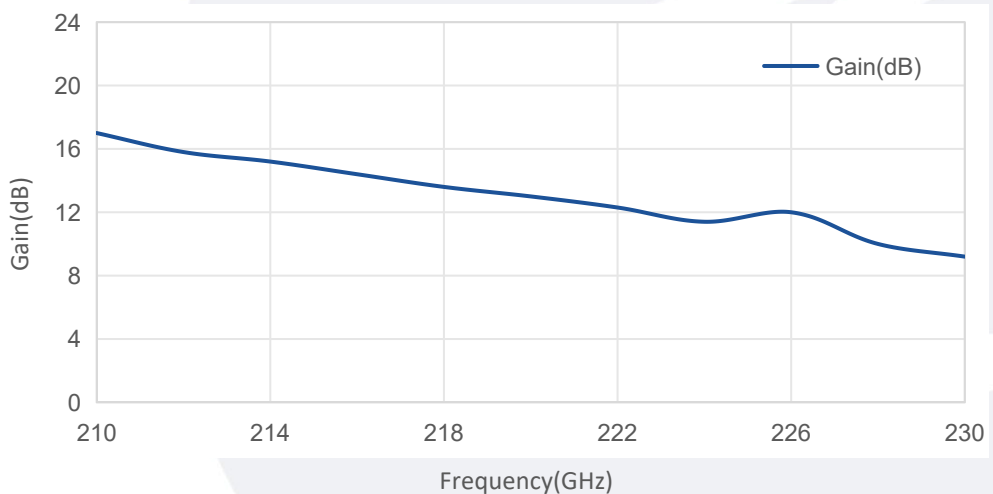
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TMPA-210230-1320-04	Power Amplifier, 210-230GHz, Gain: 13.5dB Type, Psat: 20dBm Type, +6V DC,WR-4.3, Without heatsink	Rev.1.1
TMPA-210230-1320-04-HS	Power Amplifier, 210-230GHz, Gain: 13.5dB Type, Psat: 20dBm Type, +6V DC,WR-4.3, With heatsink	Rev.1.1

Typical Performance Data:

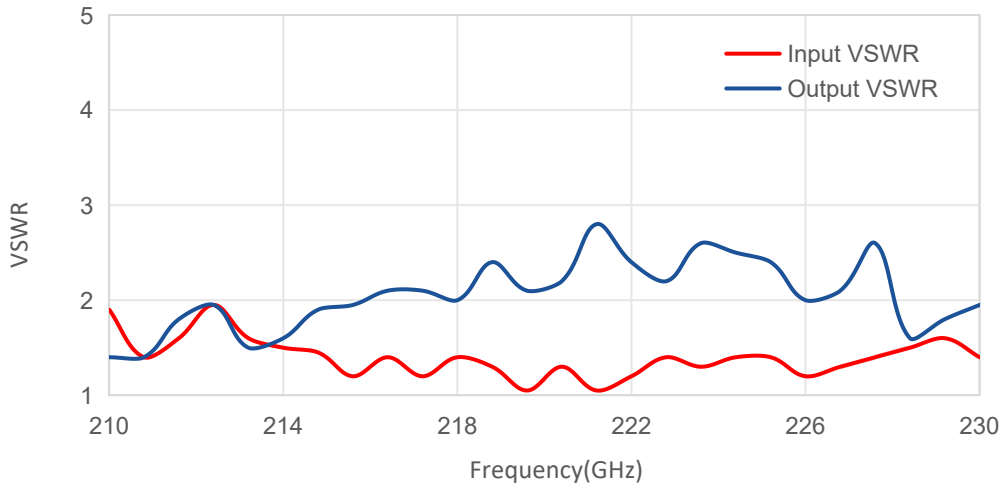
Gain vs Frequency



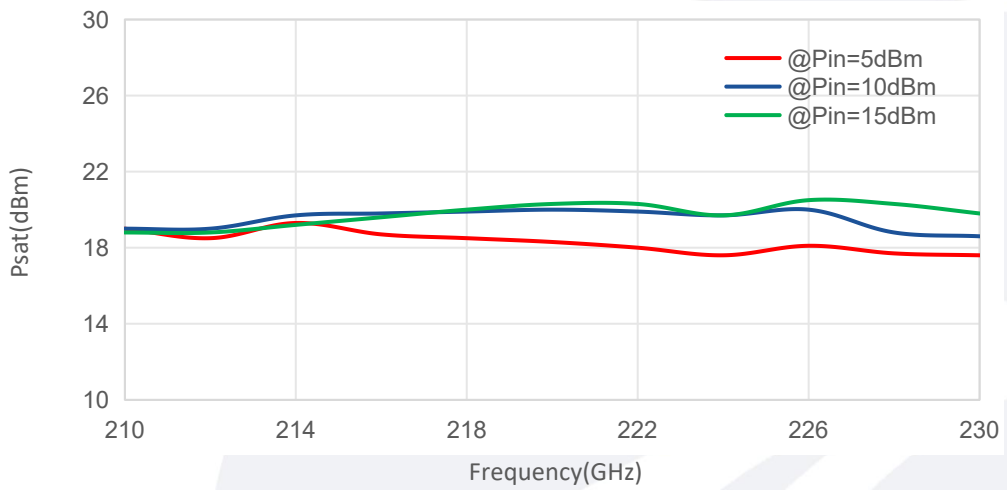
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

VSWR vs Frequency



Psat vs Frequency



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