

F-Band Power Amplifier

WR-08/90-140GHz/30dB Gain/20dBm Psat

Model: TMPA-090140-3020-08

TMPA-090140-3020-08 is a F-Band power amplifier with a typical small signal gain of 30 dB and a nominal Psat of 20 dBm across the frequency range of 90 to 140 GHz. The DC power requirement for the amplifier is +12 VDC. The input and output port configuration offers an inline structure with WR-08 waveguides and UG-387/U-M anticocking flanges.

Features:

- Frequency range: 90-140GHz
- Gain: 30dB Typ
- Output Power Psat: 20dBm Min
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	90		140	GHz
Small Signal Gain		30		dB
Output Psat	20			dBm
Input VSWR		2.5		:1
Output VSWR		2		:1
DC Voltage		12		V DC
DC Supply Current		270		mA

Mechanical Specifications:

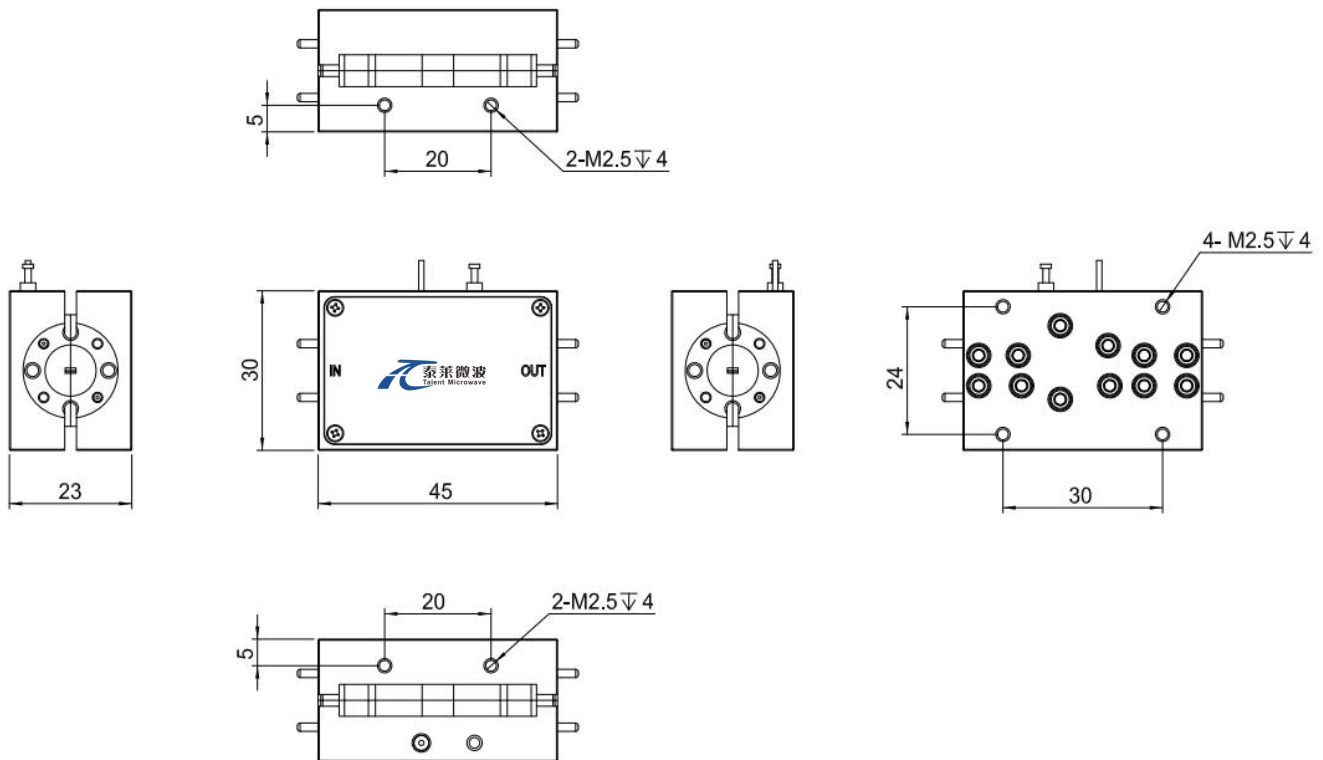
Parameter	Value	Units
Input /Output Connector	WR-08/UG-387/U	
DC Bias	Solder Pin	
Size	45*30*23	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+14 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.

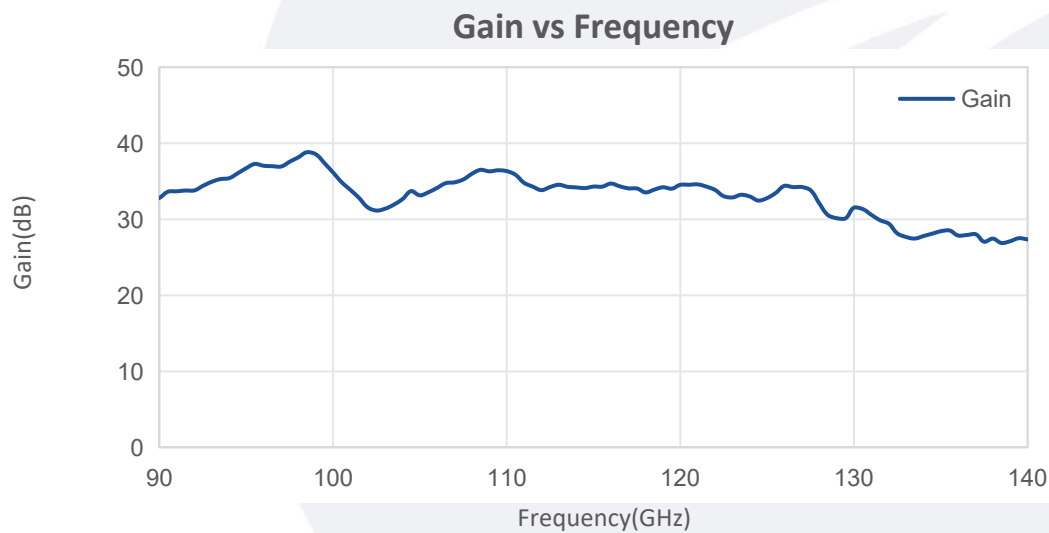
Environmental Conditions:

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:

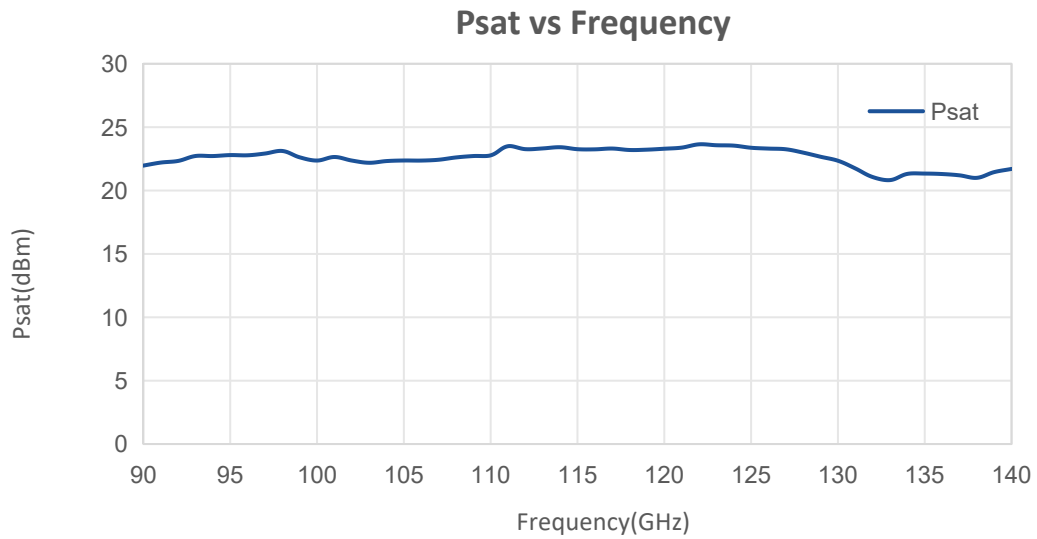
Base Number	Description	Revision
TPMA-090140-3020-08	Power Amplifier, 90-140 GHz, Gain:30 dB Type, Psat:20 dBm Min, +12V DC,WR-08, Without heatsink	Rev.1.1
TPMA-090140-3020-08-HS	Power Amplifier, 90-140 GHz, Gain:30 dB Type, Psat:20 dBm Min, +12V DC,WR-08, With heatsink	Rev.1.1

Typical Performance Data:



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.

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