

Power Amplifier

WR-12/75-80GHz/16dB Gain/19dBm Psat

Model: TMPA-075080-1517-12

TMPA-075080-1517-12 is a power amplifier with a typical small signal gain of 16 dB and a nominal Psat of 19 dBm across the frequency range of 75 to 80 GHz. The DC power requirement for the amplifier is +12 VDC/125mA. The input and output port configuration offers an inline structure with WR-12 waveguides and UG-387/U-M anticocking flanges.

Features:

- Frequency range: 75-80GHz
- Gain: 16dB Typ
- Output Power Psat: 19dBm Typ
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	75		80	GHz
Small Signal Gain		16		dB
Output P1dB		18		dBm
Output Psat		19		dBm
Input VSWR		2		:1
Output VSWR		1.8		:1
DC Voltage		12		V DC
DC Supply Current		125		mA

Mechanical Specifications:

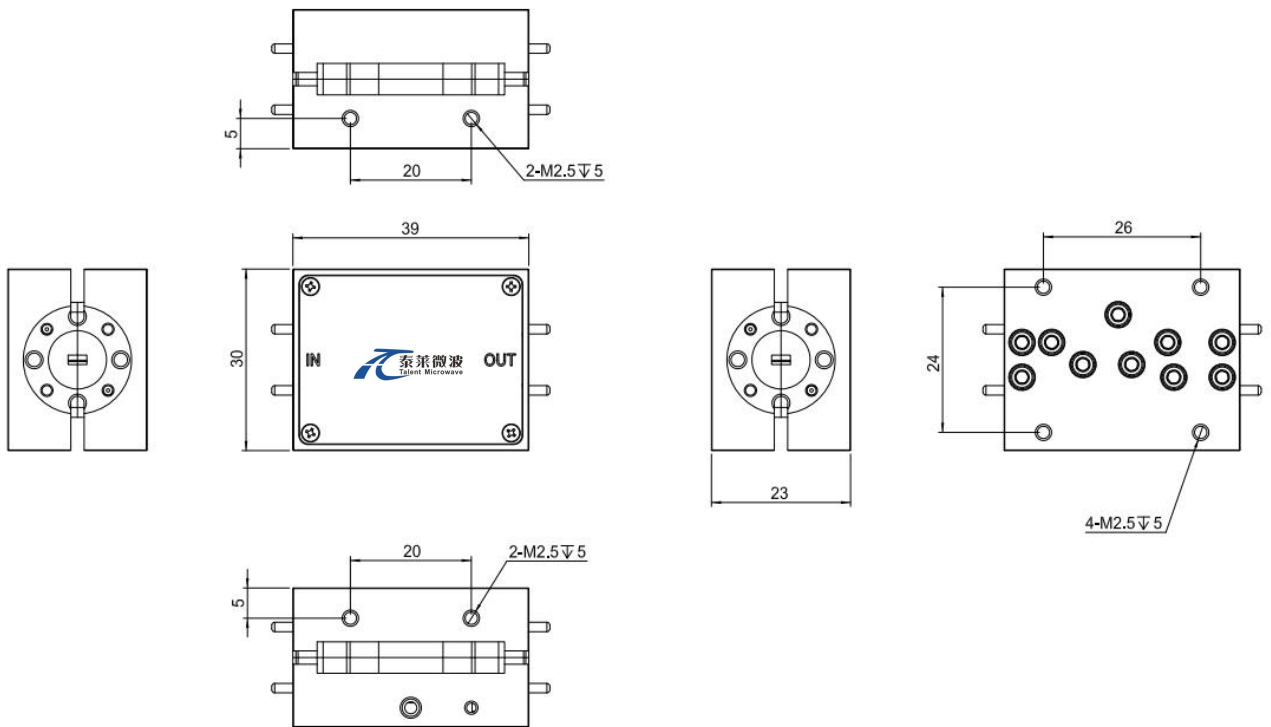
Parameter	Value	Units
Input /Output Connector	WR-12/UG-387/U	
DC Bias	Solder Pin	
Size	39*30*23	mm

Absolute Maximum Ratings:

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

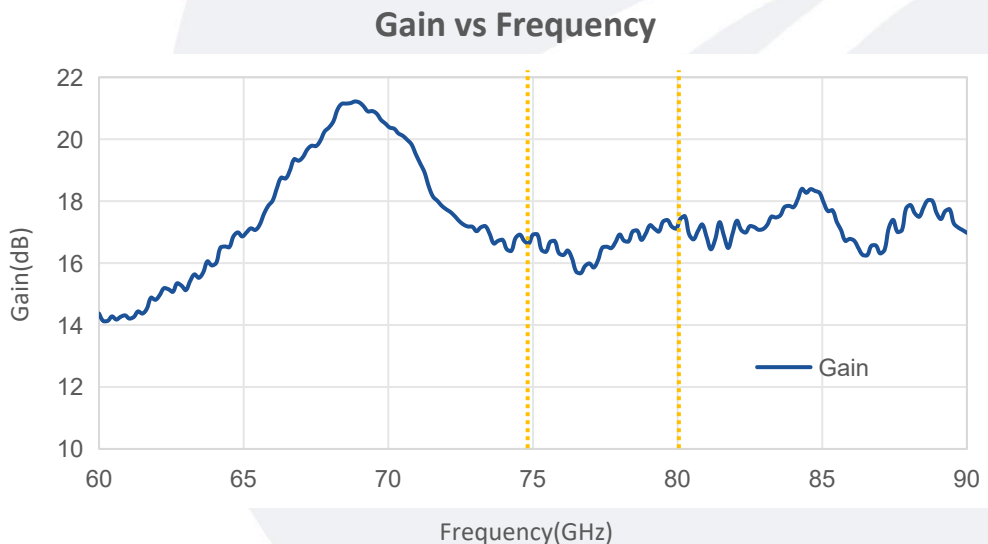
Environmental Conditions:

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-075080-1517-12	Power Amplifier, 75-80GHz, Gain: 16dB Type, Psat: 19dBm Type, +12V DC, WR-12, Without heatsink	Rev.1.0
TMPA-075080-1517-12-HS	Power Amplifier, 75-80GHz, Gain: 16dB Type, Psat: 19dBm Type, +12V DC, WR-12, With heatsink	Rev.1.0

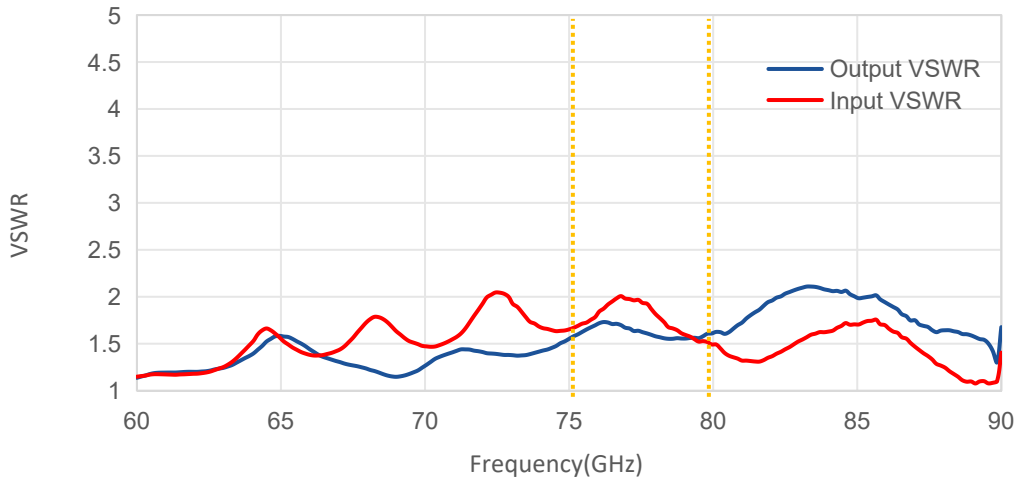
Typical Performance Data:



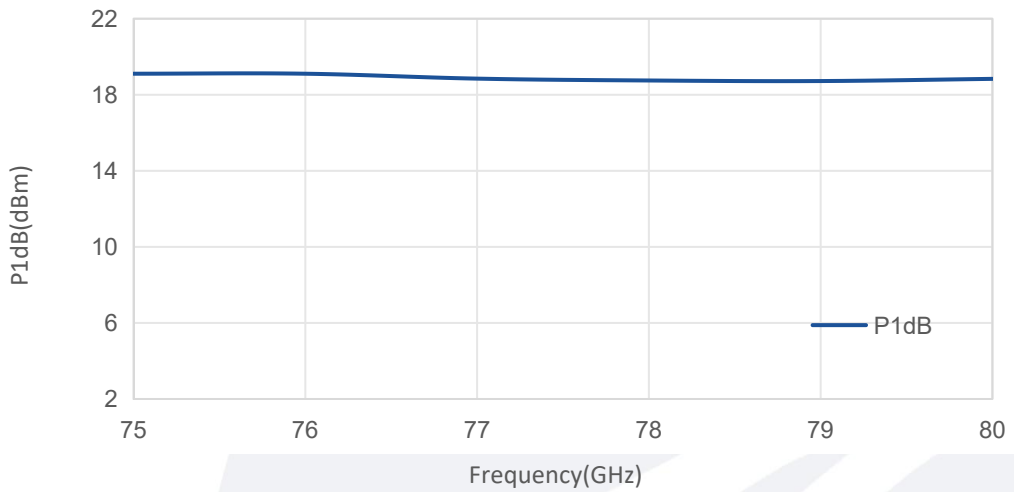
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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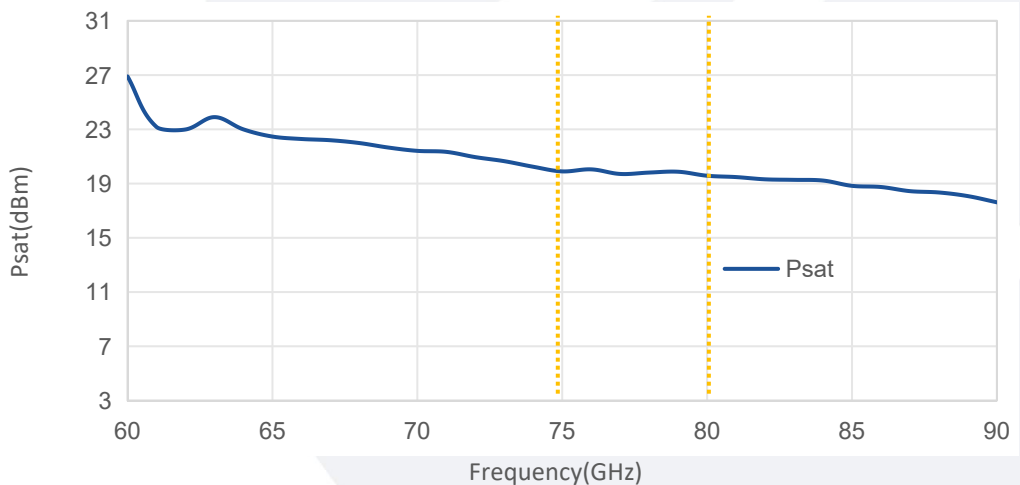
VSWR vs Frequency



P1dB vs Frequency



Psat vs Frequency



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