

E-Band Power Amplifier

WR-12/60-90GHz/40dB Gain/32dBm Psat**Model: TMPA-060090-4032-12**

TMPA-060090-4032-12 is a E-Band power amplifier with a typical small signal gain of 40 dB and a nominal Psat of 32 dBm across the frequency range of 60 to 90 GHz. The DC power requirement for the amplifier is +16 VDC/1.64A. The input and output port configuration offers an inline structure with WR-12 waveguides and UG-387/U-M antickocking flanges.

Features:

- Frequency range: 60-90GHz
- Gain: 40dB Typ
- Output Power Psat: 32dBm Typ
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	60		90	GHz
Small Signal Gain		40		dB
Output Psat		32		dBm
Output P1dB		29		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		16		V DC
DC Supply Current		1.64		A

Mechanical Specifications:

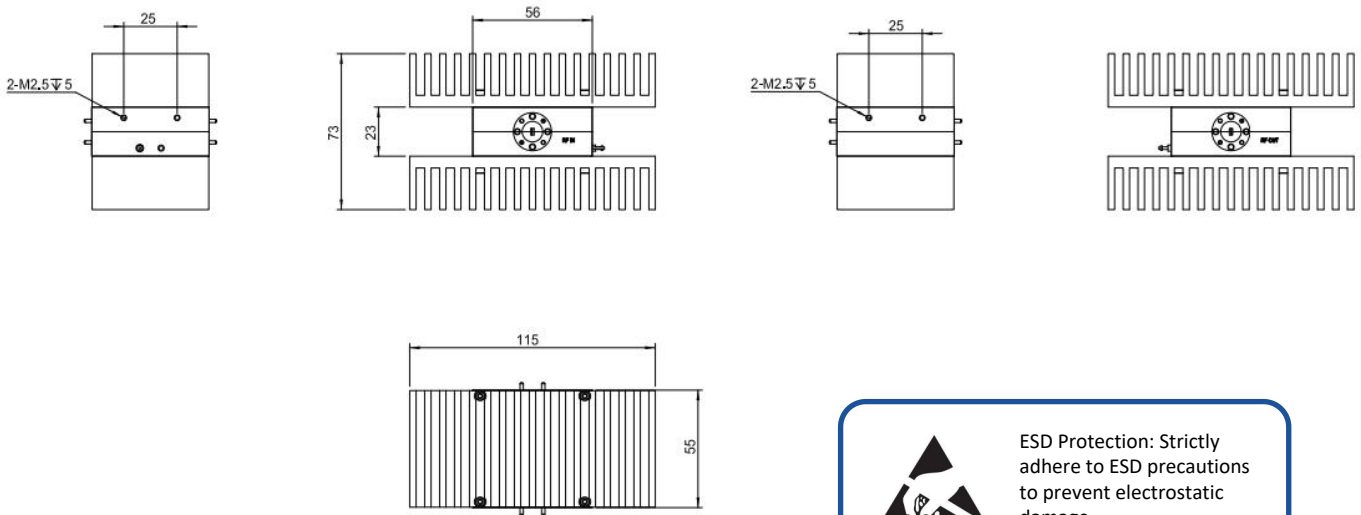
Parameter	Value	Units
Input /Output Connector	WR-12/UG-387/U	
DC Bias	Solder Pin	
Size	56*55*23(Without Heatsink) 115*55*73(With Heatsink)	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+18 V
RF Input Power	+15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Environmental Conditions:

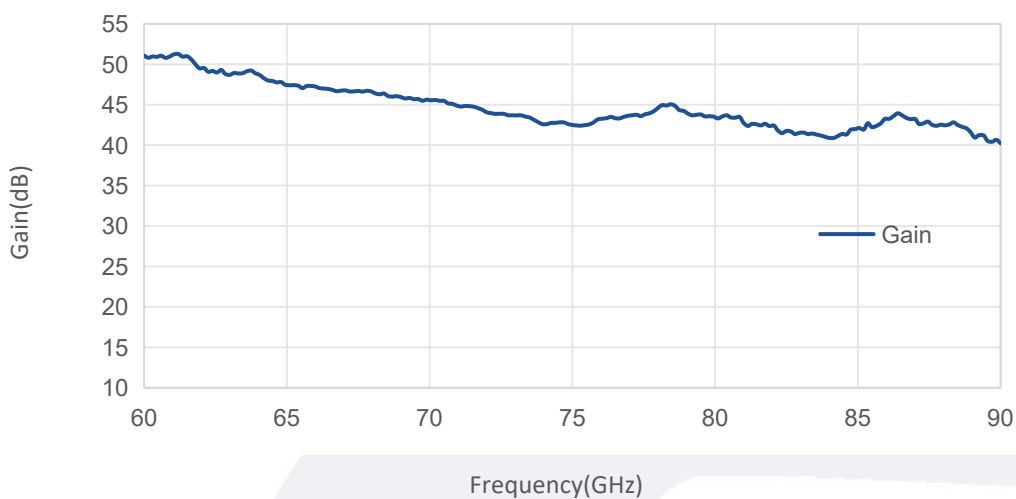
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

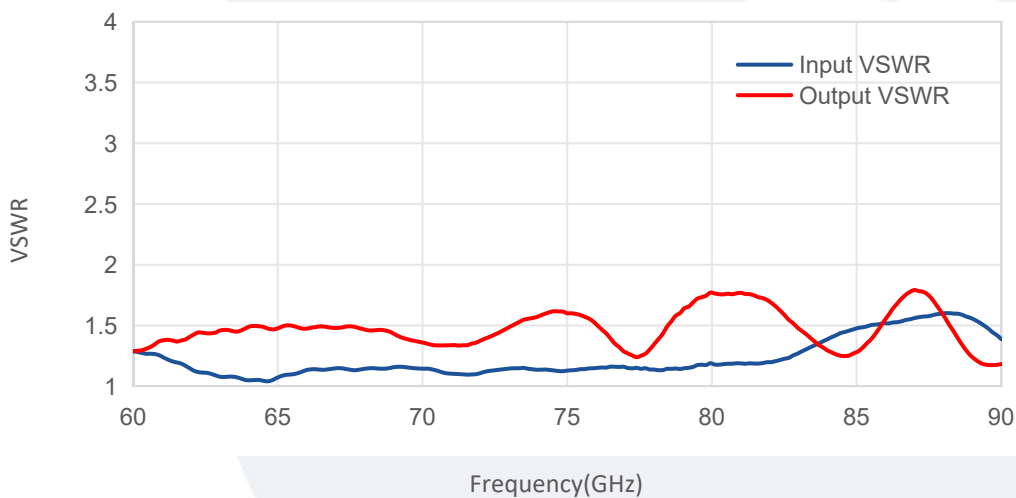
Base Number	Description	Revision
TMPA-060090-4032-12	Power Amplifier, 60-90 GHz, Gain:40 dB Type, P _{sat} :32 dBm Type, +16V DC,WR-12	Rev.1.2

Typical Performance Data:

Gain vs Frequency



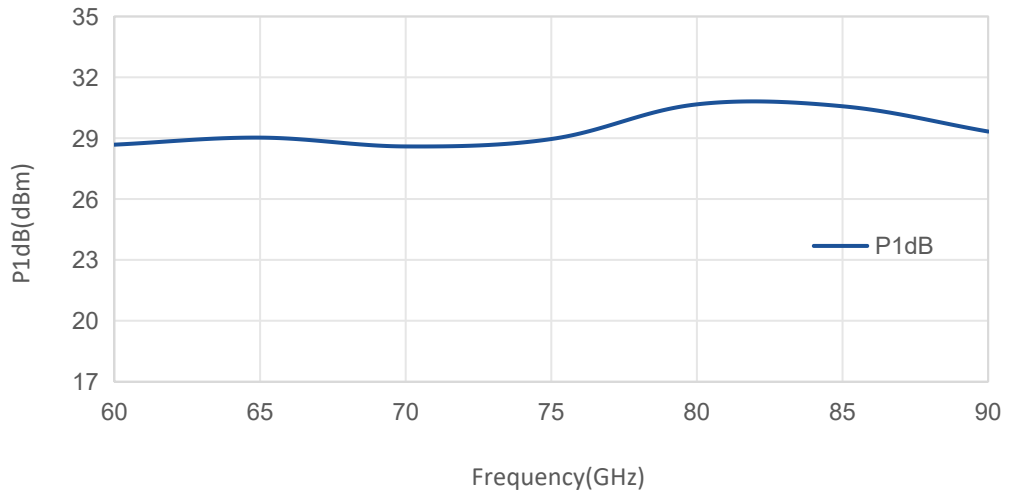
VSWR vs Frequency



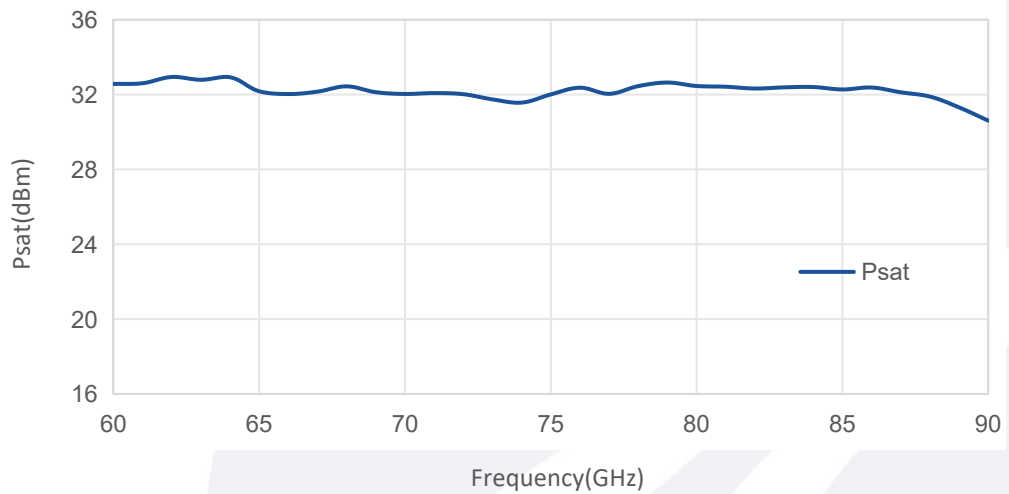
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

P1dB vs Frequency



Psat vs Frequency



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