Power Amplifier

WR-6.5/110-170GHz/17dB Gain/17dBm Psat   Model: TMPA-110170-1717-06

TMPA-110170-1717-06 is a power amplifier with a typical small signal gain of 17 dB and a nominal Psat of 17 dBm across the frequency range of 110 to 170 GHz. The DC power requirement for the amplifier is +12 VDC/360 mA. The input and output port configuration offers an inline structure with WR-6.5 waveguides and UG-387/U-M anticocking flanges.

Features:

- Frequency range: 110-170GHz
- Gain: 17dB Typ
- Output Power Psat: 17dBm Typ
- Good Power and Gain Flatness

Applications:

- Passive Imaging
- Communication Systems
- Radar Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	110		170	GHz
Small Signal Gain		17		dB
Gain Flatness		±3.0		dB
Output P1dB		10		dBm
Output Psat		17		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		12		V DC
DC Supply Current		360		mA

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	WR-6.5/UG-387/U	
DC Bias	Solder Pin	
Size	35.2*30*23	mm

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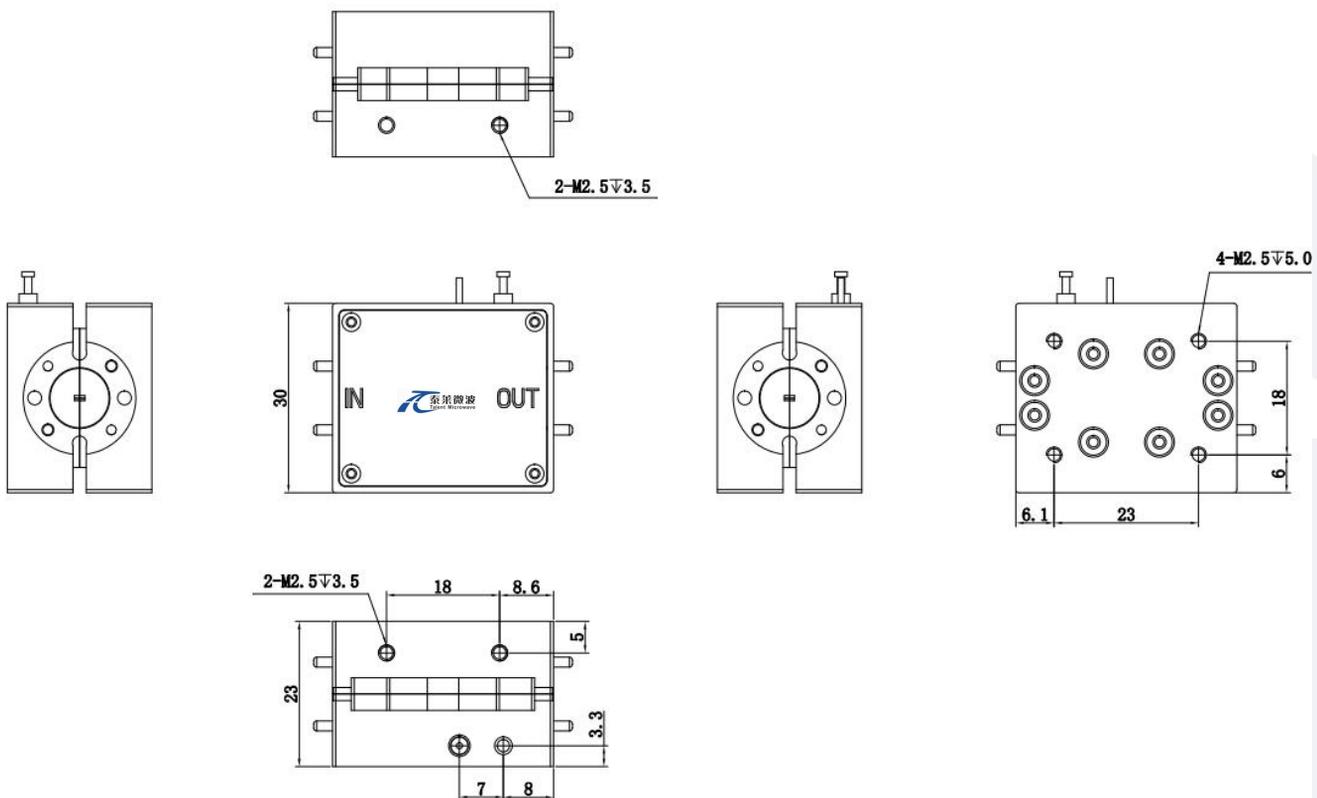
ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
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-110170-1717-06	Power Amplifier, 110-170GHz, Gain: 17dB Type, Psat: 17dBm Type, +12V DC,WR-6.5	Rev.1.1

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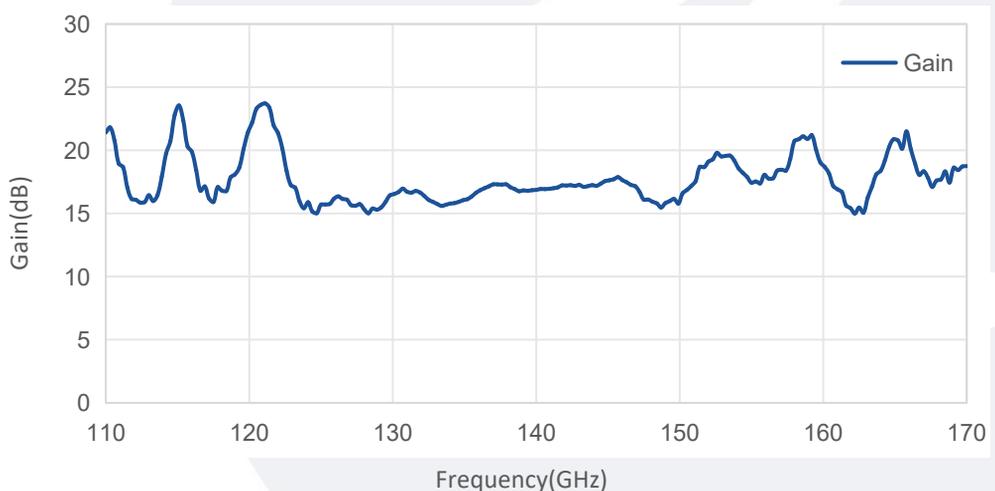
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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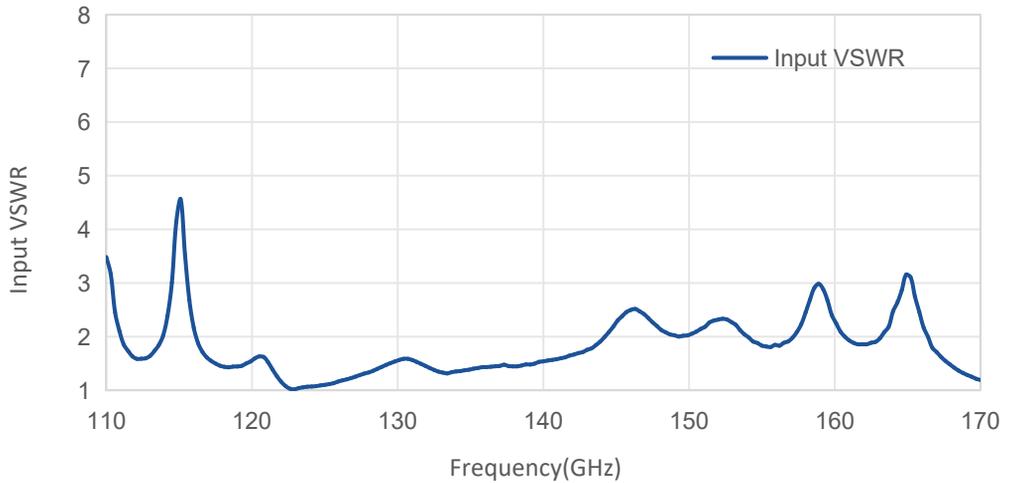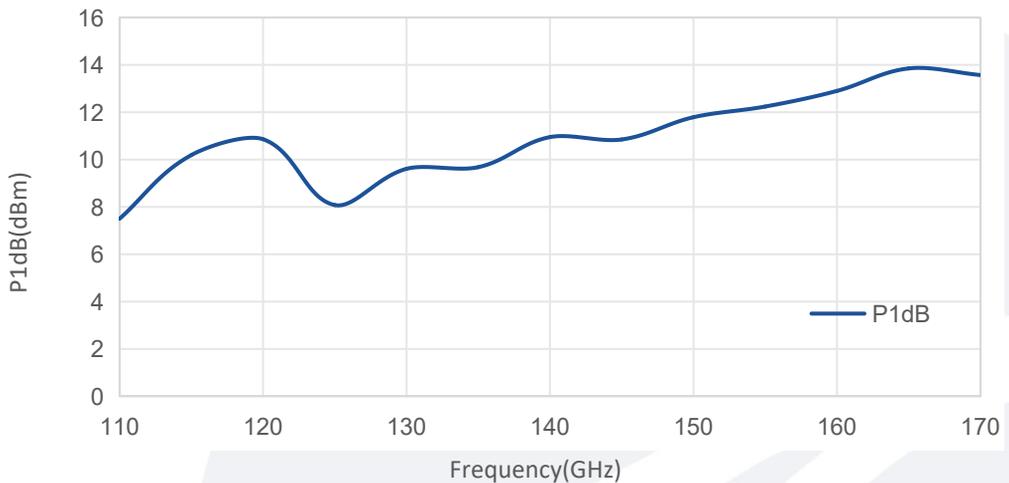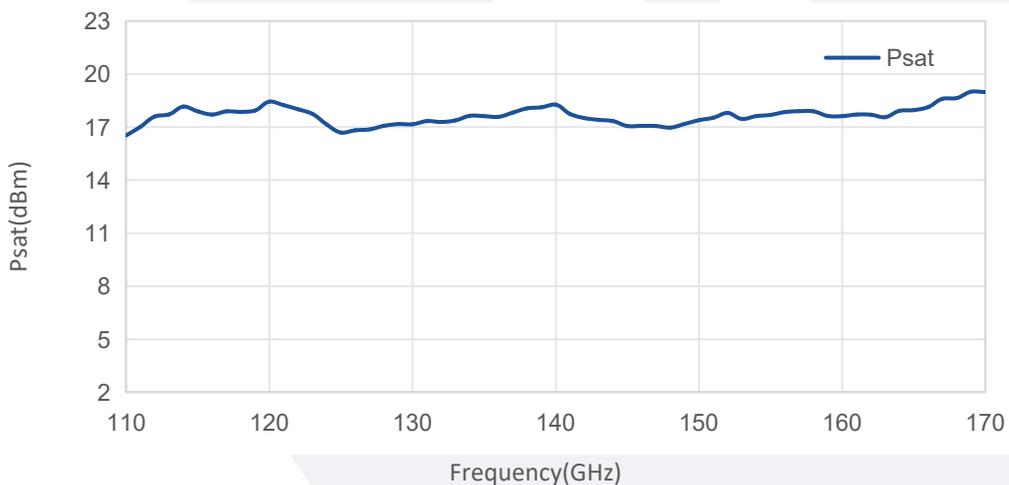### Input VSWR vs Frequency

P1dB vs Frequency

Psat vs Frequency

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