

Power Amplifier

8-12GHz /47dB Gain/46 dBm Psat

Model: TLPA8G12G-47-46

TLPA8G12G-47-46 is a power amplifier with small signal gain of 47 dB and Psat of 46 dBm across the frequency range of 8 to 12 GHz. The DC power requirement for the amplifier is +28 VDC/9.3 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 8-12 GHz
- Gain: 47dB min
- Output Power Psat: 46dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	8-12			GHz
Small Signal Gain	47			dB
Gain Flatness		±2		dB
Output Psat	46			dBm
Spurious@Pout=46dBm			-60	dBc
Harmonic@Pout=46dBm		-25		dBc
Input VSWR			2	:1
DC Voltage	26	28	30	V DC
DC Supply Current			9.3	A
Impedance	50			Ohms

Mechanical Specifications:

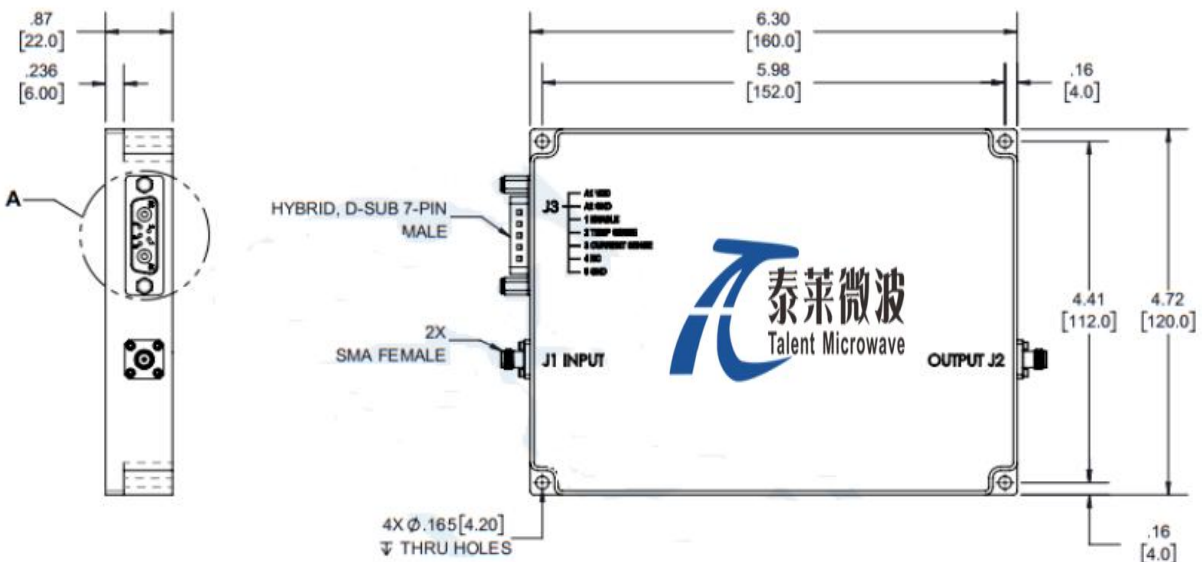
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Supply Connector	DSUB-7W2	
Size	160*120*22(Without Heatsink) 258*125*135(Heatsink Size)	mm
Weight	≤620	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



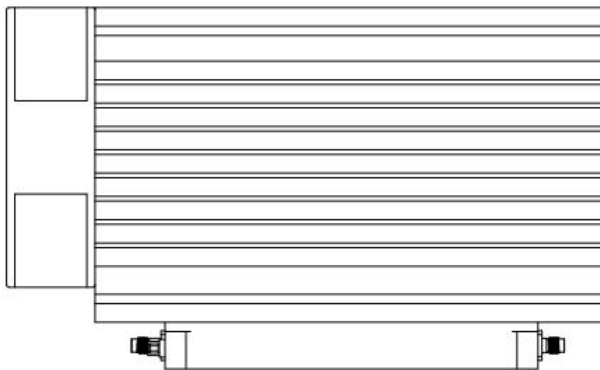
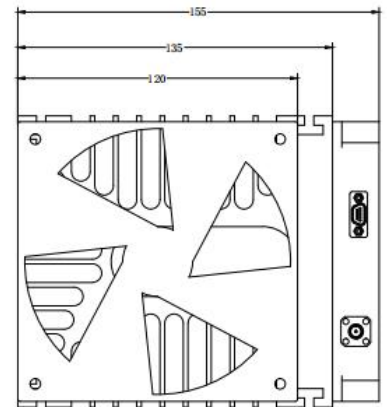
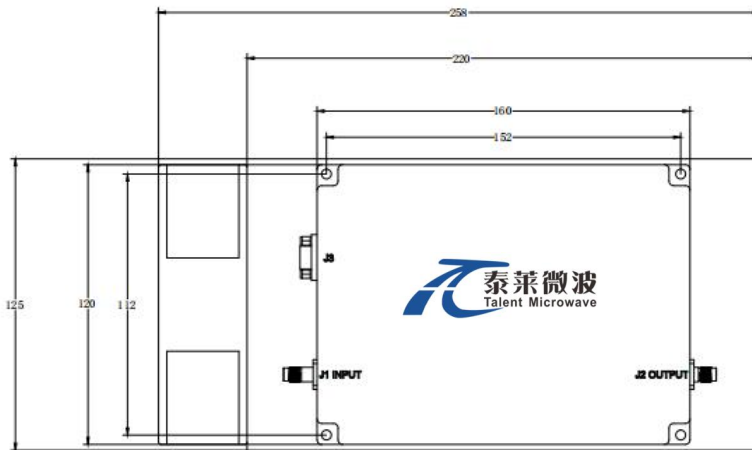
*****Heat Sink Required During Operation**



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Outline Drawing:

Unit:mm



DC Supply Connector(DSUB-7W2):

DSUB-7W2 Define	
Pin	Function
A1	+28V
A2	GND
Pin1	Enable
Pin2	Temperature Sensor
Pin3	Current Sensor
Pin4	NC
Pin5	GND

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	°C
Non-operating Temperature*	-50		+60	°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			

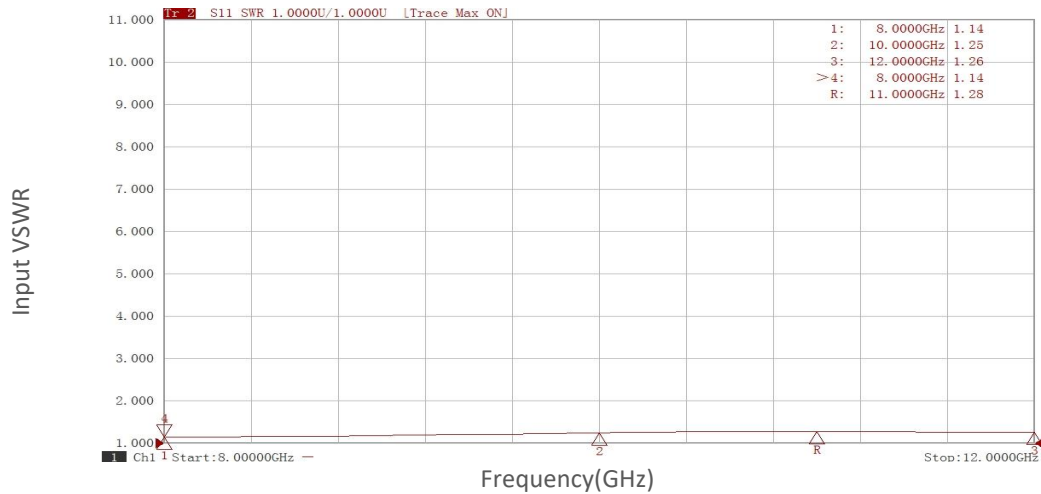
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

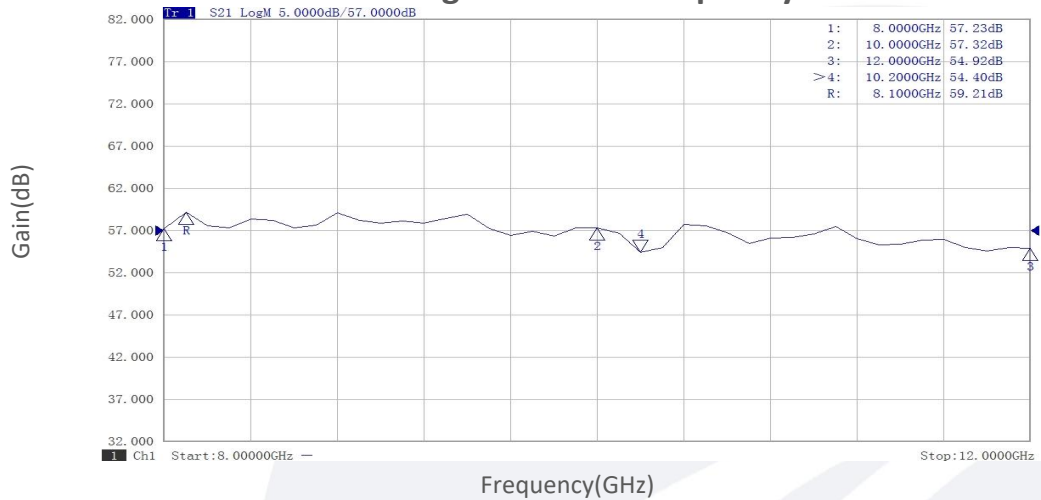
Base Number	Description	Revision
TLPA8G12G-47-46	Power amplifier 8-12GHz,Gain:47dB,Psat:46dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA8G12G-47-46-HS	Power amplifier 8-12GHz,Gain:47dB,Psat:46dBm, +28V DC,With Heatsink	Rev.1.1

Typical Performance Data:

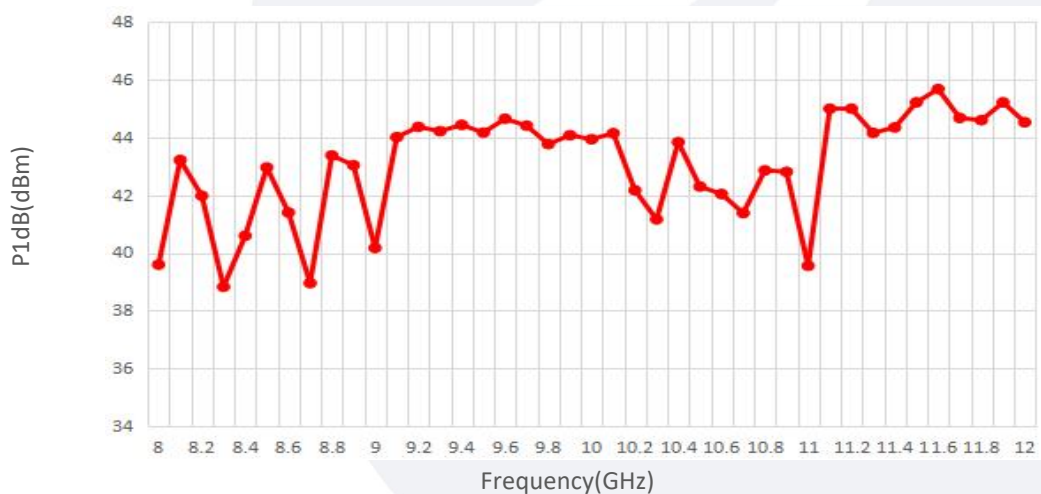
Input VSWR vs Frequency



Small Signal Gain vs Frequency

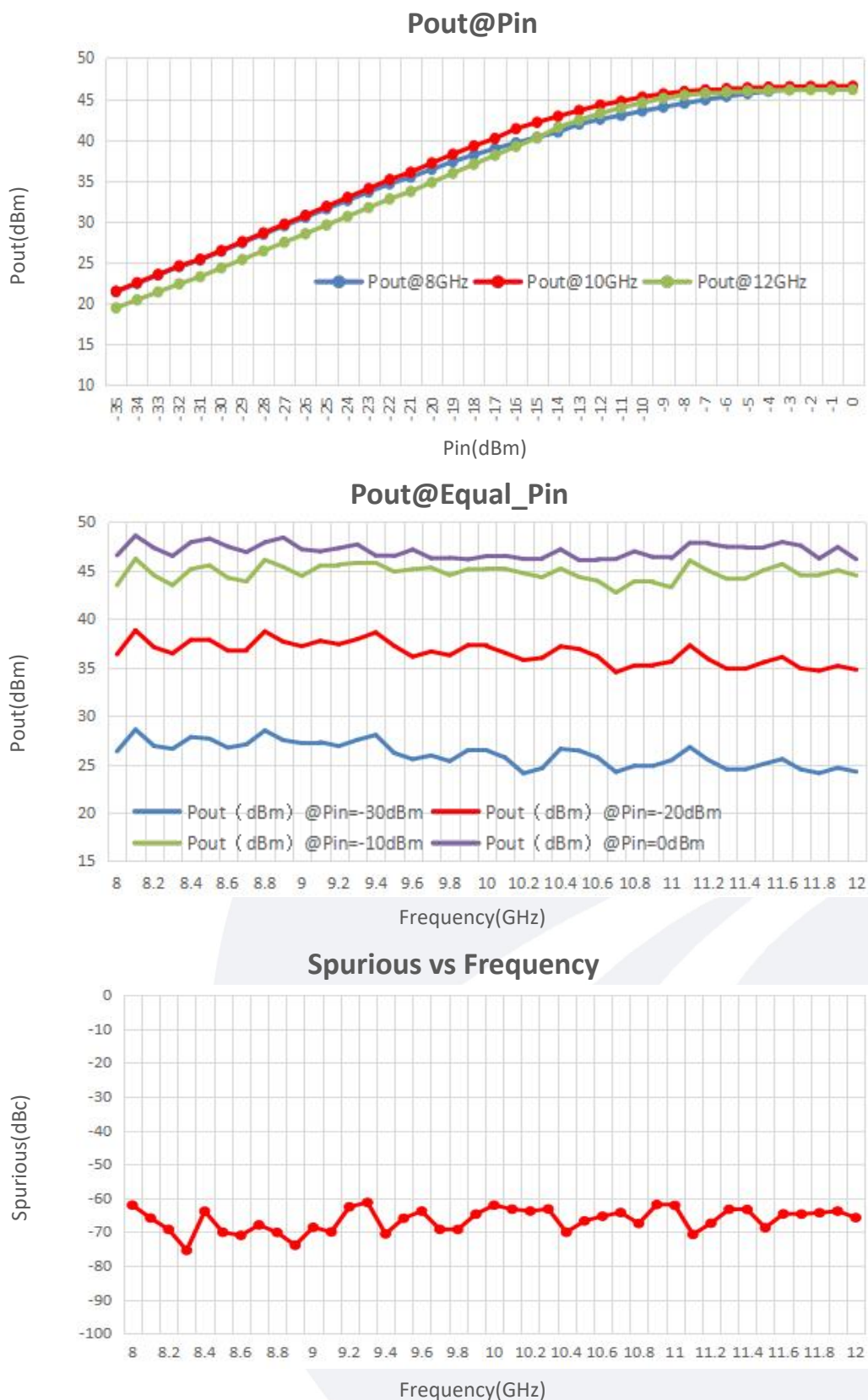


P1dB vs Frequency



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.

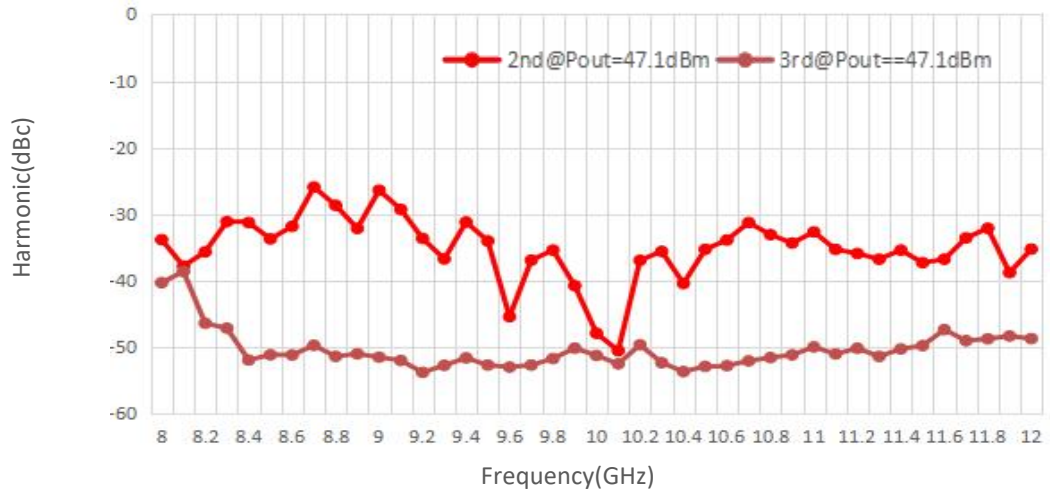
Typical Performance Data:



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:

Harmonic 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.