

Power Amplifier

42-46GHz/47dB Gain/47dBm Psat

Model: TLPA42G46G-47-47

TLPA42G46G-47-47 is a power amplifier with a minimum power gain of 47 dB and a nominal Psat of 47 dBm across the frequency range of 42 to 46 GHz. The DC power requirement for the amplifier is +24 VDC. The input port configuration offers coax adapter structure with 2.4mm female and output port configuration offers WR22.

Features:

- Frequency range: 42-46GHz
- Gain: 47dB Min
- Output Power Psat: 47dBm Typ
- 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	42-46			GHz
Power Gain	47			dB
Gain Flatness		±3		dB
Output Psat	46	47		dBm
Output IM3*		-25		dBc
Spurious@Pout=46dBm			-60	dBc
2nd Harmonic@Pout=46dBm			-30	dBc
Input VSWR			2	:1
DC Voltage		24	25	V DC
Power Consumption			420	W
Impedance	50			Ohms

*Note: Two tone, spacing 5MHz, total power 42dBm.

Mechanical Specifications:

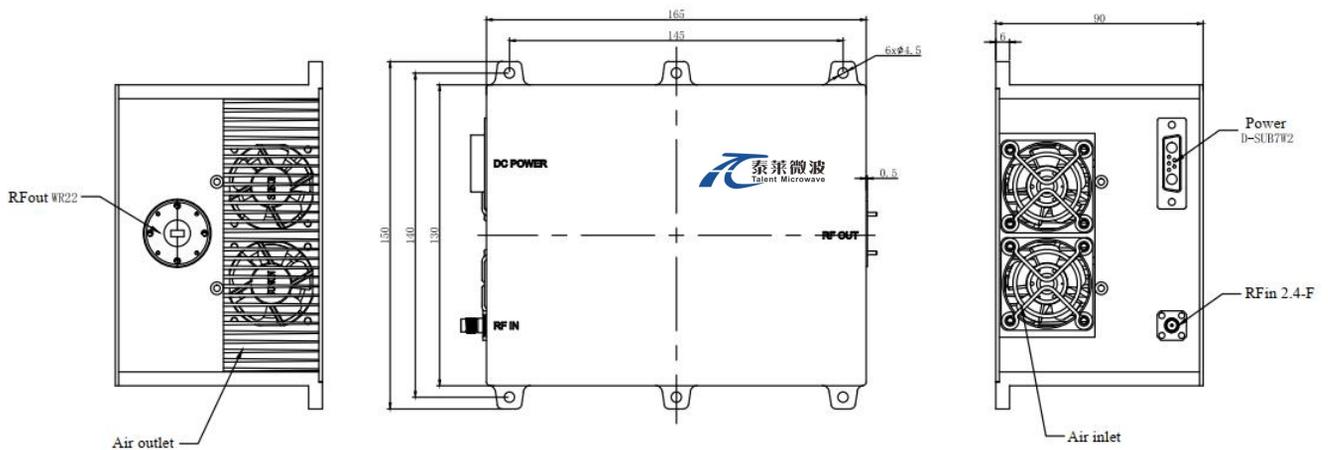
Parameter	Value	Units
Input Connector	2.4mm Female	
Output Connector	WR22	
DC Power Supply&Control Connector	DSUB-7W2	
Size	165*130*90	mm
Weight	≤4.5	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+25 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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

DC Supply Connector(DSUB-7W2):

Pin	Name	Function
A1	+24V	Power supply positive,+24.0VDC
A2	GND	Ground
Pin1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: TTL Low (0V)Short to ground
Pin2		Voltage sensor
Pin3		Current sensor
Pin4		TEMP sensor
Pin5		GND

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	+30		+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
TLPA42G46G-47-47	Power amplifier 42-46GHz, Gain:47dB,Psat:47dBm,+24V DC, Built in Fan Cooling	Rev.1.0