



# Power Amplifier

## Model: PA-42G-46G-50

42-46GHz 50W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 42-46GHz
- High output power at saturation, 50W Typ.
- High gain, 47 dB Min.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-42G-46G-50 is a power amplifier with a minimum power gain of 47 dB and a nominal Psat of 50W across the frequency range of 42 to 46 GHz. The DC power requirement for the amplifier is +24 VDC/420 W. The input port configuration offers coax adapter structure with 2.4mm female and output port is WR22.



## Electrical Specifications at 25°C:

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 Harmonics@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	Notes
Operating Temperature*	-20°C to +50°C	
Non-operating Temperature*	-30°C to +60°C	
Relative humidity	95	%
RF Input/Output Connector	2.4mm Female/WR22	
DC Power Supply&Control Connector	DSUB-7W2	
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	
Dimensions W x H x D	165*150*90	mm
Weight	≤4.5	Kg

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

## Absolute Maximum Ratings:

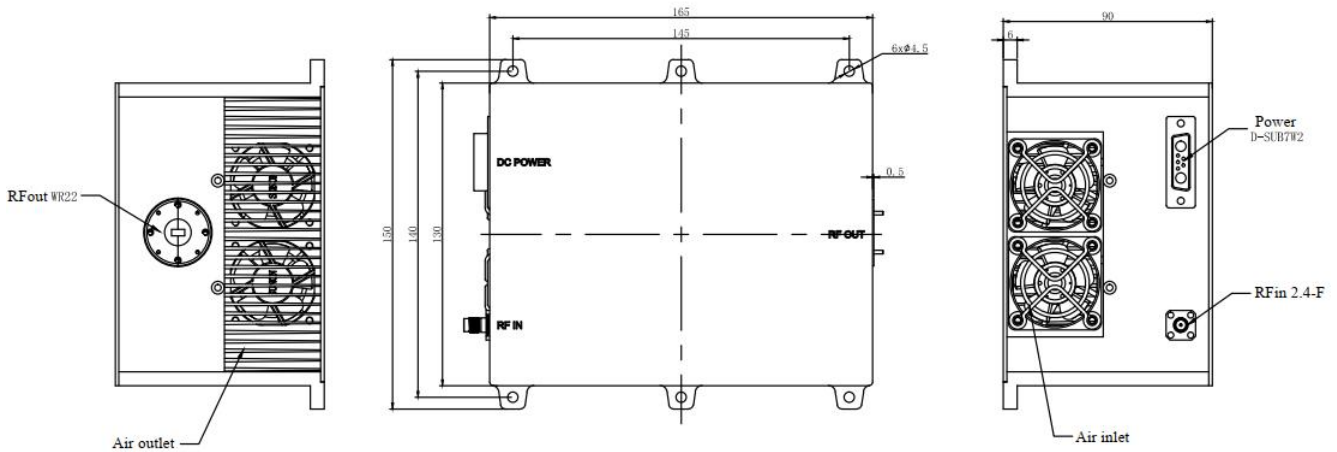
Parameter	Value
Supply Bias Voltage	+25 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



## Outline Drawing:

Unit:mm

PA-42G-46G-50



## DC Supply Connector(DSUB-9 Female):

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

## Ordering Information:

Base Number	Description	Optional
PA-42G-46G-50	Power Amplifier, 42-46GHz, Gain:47dB,Psat:50W,+24V DC	With Heatsink