

Low Noise Amplifier

15-45GHz /2.5dB NF/22dB Gain/16.5 dBm P1dB

Model: TLLA15G45G-22-25-LC

TLLA15G45G-22-25-LC is a low noise amplifier with small signal gain of 22 dB and noise figure of 2.5 dB across the frequency range of 15 to 45 GHz. The DC power requirement for the amplifier is +5 V DC/90 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range:15-45GHz
- Gain: 22dB Typ
- Noise Figure: 2.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	15		45	GHz
Small Signal Gain		22		dB
Gain Flatness		±2		dB
Noise Figure	2	2.5	4	dB
Output P-1 dB		16.5		dBm
Input VSWR		2.0		:1
Output VSWR		2.0		:1
DC Voltage		+5		V DC
DC Supply Current		90		mA
Impedance	50			Ohms

Mechanical Specifications:

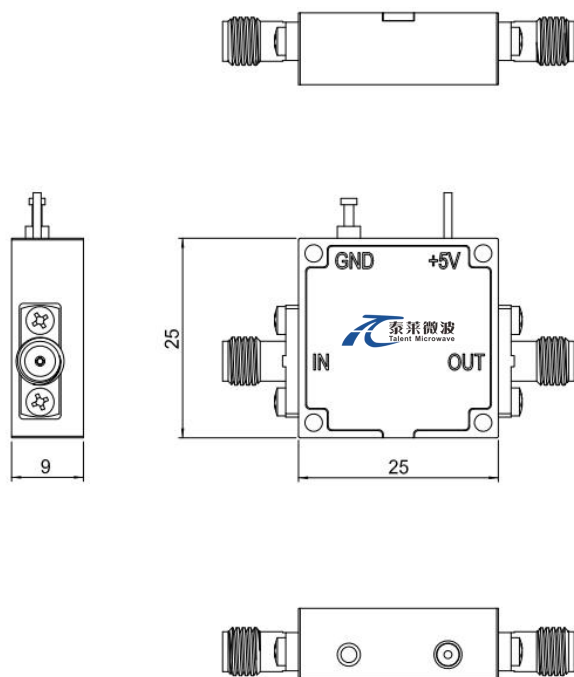
Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	25*25*9	mm

Absolute Maximum Ratings:

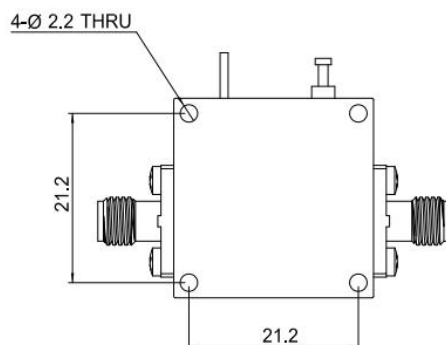
Parameter	Value
Supply Bias Voltage	+8 V
RF Input Power	+17 dBm
ESD sensitivity (Hbm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Regulatory Compliance:



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

Environmental Conditions:

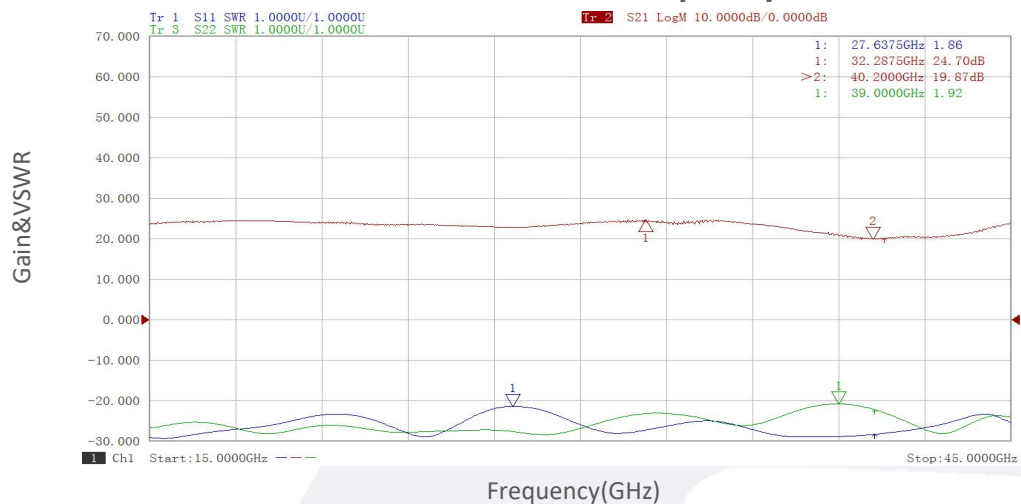
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

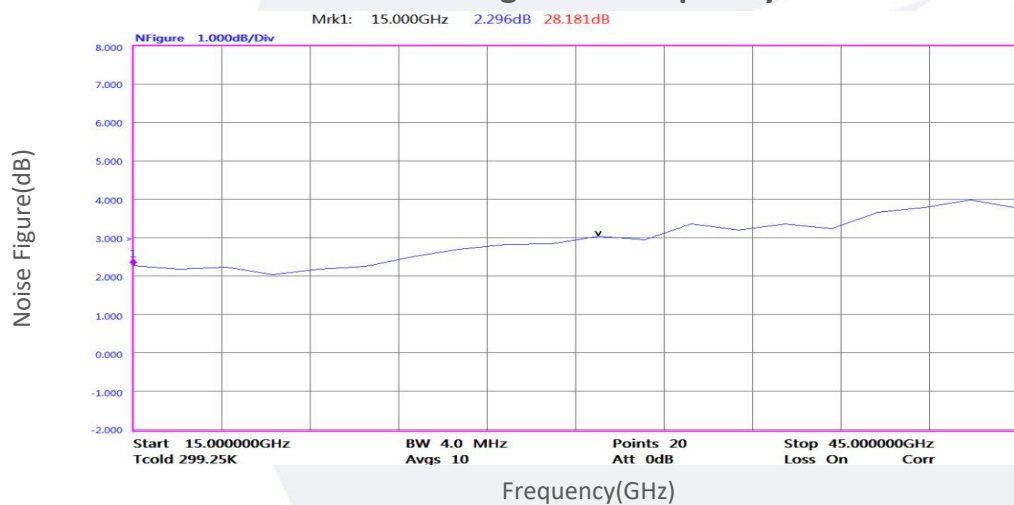
Base Number	Description	Revision
TLLA15G45G-22-25-LC	Low Noise Amplifier, 15-45GHz, Noise Figure:2.5dB, Gain:22 dB,P1dB:16.5dBm,+5V DC,Without Heatsink	Rev.1.0

Typical Performance Data:

Gain&VSWR vs Frequency

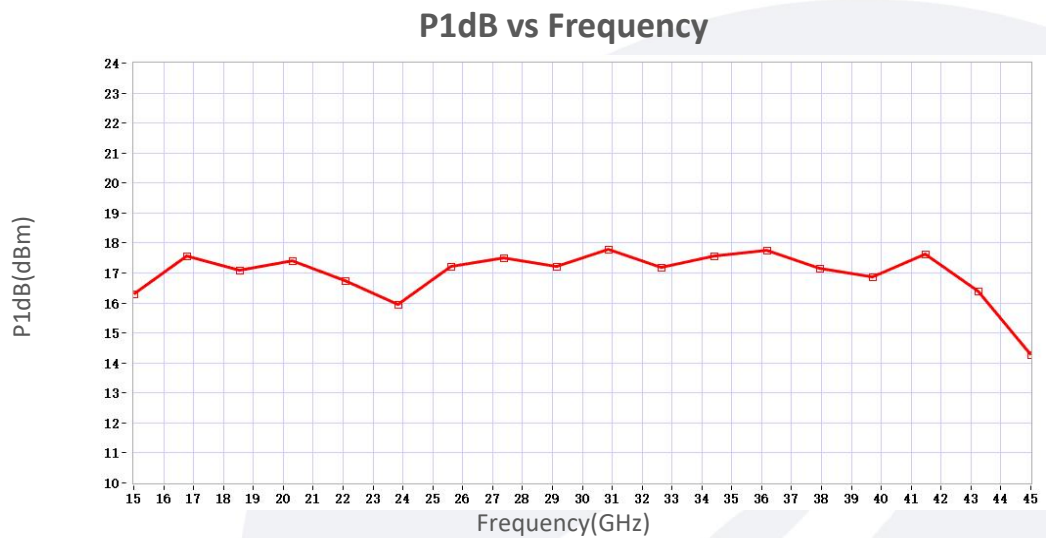
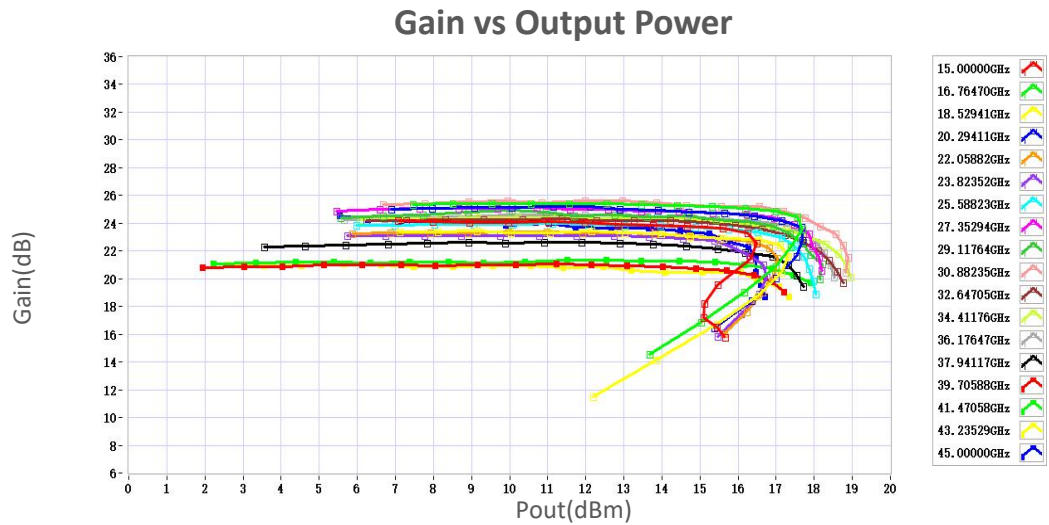


Noise Figure vs Frequency



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.