

Low Noise Amplifier

17-40GHz /4.5dB NF/15dB Gain/15dBm P1dB

Model: TLLA17G40G-37-45

TLLA17G40G-37-45 is a low noise amplifier with a typical small signal gain of 37 dB and a nominal noise figure of 4.5 dB across the frequency range of 17 to 40 GHz. The DC power requirement for the amplifier is +6 V DC/0.8 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Ultra Wide Band:17-40 GHz
- Gain: 37dB Typ
- Noise Figure: 4.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	17		40	GHz
增益 Gain	35	37		dB
增益平坦度 Gain Flatness		±3.5		dB
噪声系数 Noise Figure		4.5	6	dB
线性输出功率 Output P1dB	26.5	28		dBm
饱和输出功率 Output Psat		29		dBm
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage		6	8	V DC
直流电流 DC Supply Current		0.8		A
阻抗 Impedance	50			Ohms

机械特性 Mechanical Specifications:

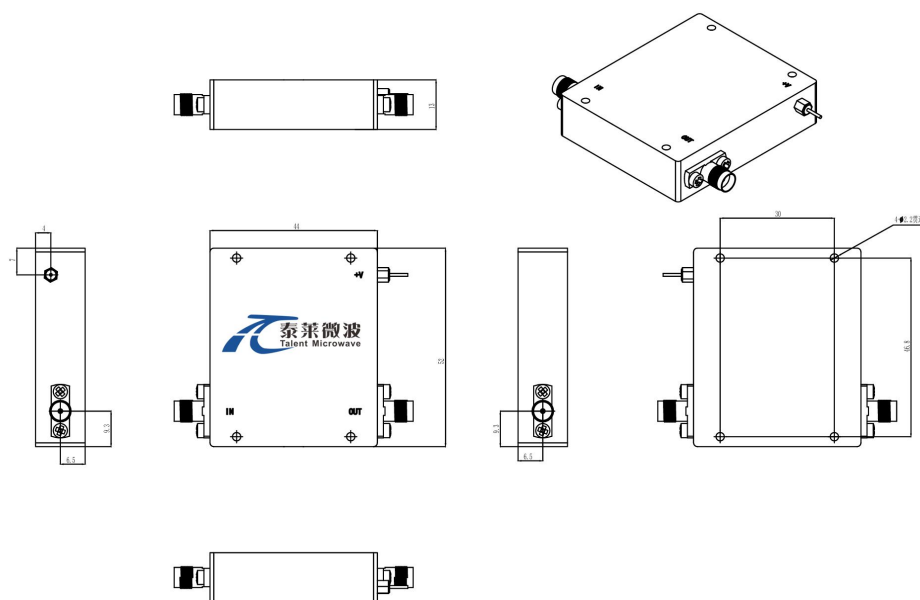
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.92mm Female/2.92mm Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44*52*13(Without Heatsink) 50*63*120(With Heatsink)	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+8 V
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



***Heat Sink Required During Operation



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

温度环境 Environmental Conditions:

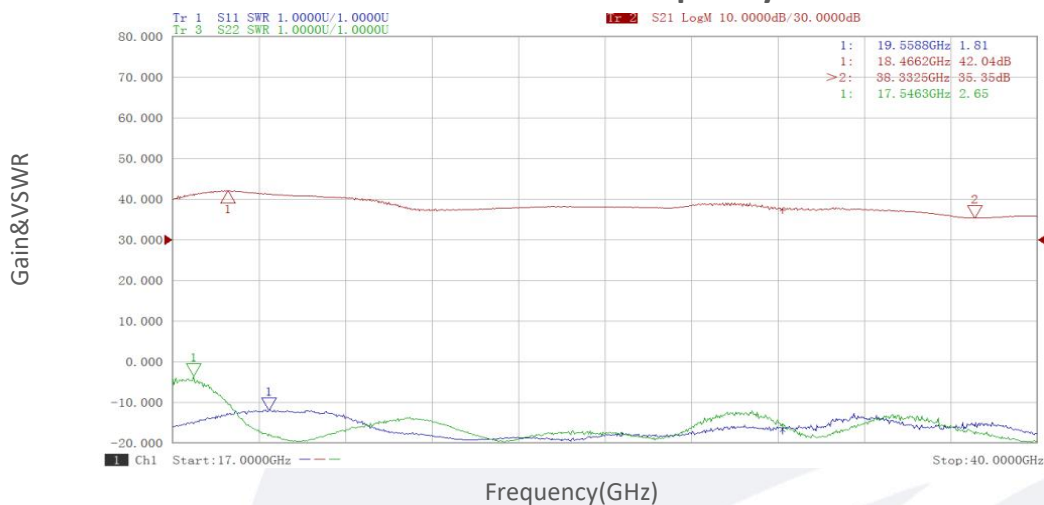
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc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

订货信息 Ordering Information:

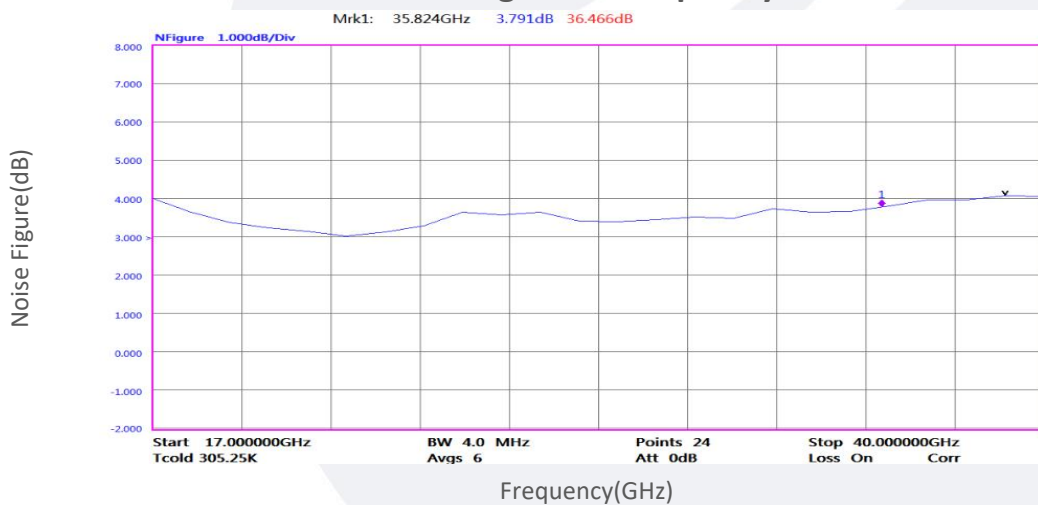
标准型号 Base Number	描述 Description	版本号 Revision
TLLA17G40G-37-45	Low Noise Amplifier, 17-40GHz, Noise Figure:4.5dB, Gain:37 dB,P1dB:28dBm,+6V DC,Without Heatsink	Rev.1.1
TLLA17G40G-37-45-HS	Low Noise Amplifier, 17-40GHz, Noise Figure:4.5dB, Gain:37 dB,P1dB:28dBm,+6V DC,With Heatsink	Rev.1.1

典型曲线 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.