

Power Amplifier

0.4-6GHz /45dB Gain/45 dBm Psat

Model: TLPA0.4G6G-45-45-WATERPROOF

TLPA0.4G6G-45-45-WATERPROOF is a power amplifier with power gain of 45 dB and a nominal Psat of 45 dBm across the frequency range of 0.4 to 6 GHz. The DC power requirement for the amplifier is +36 VDC/350 W. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Features:

- Ultra Wide Band: 0.4-6 GHz
- Gain: 45dB Min
- Output Power Psat: 45dBm Min
- Protection: Over TEM, over current, over voltage, load VSWR protection
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range		0.4-6		GHz
线性增益 Linear Gain		55		dB
线性增益平坦度 Linear Gain flatness@full band		±3		dB
功率增益 Power Gain	45			dB
饱和输出功率 Output Psat	45			dBm
饱和输出功率平坦度 Output Psat flatness			±1.5	dB
增益稳定度 Gain stability@24h			±0.25	dB
杂散 Spurious@Pout=45dBm			-60	dBc
谐波 Harmonics@Pout=45dBm		-10		dBc
输入驻波 Input VSWR		1.5	2	:1
匹配负载驻波 Load VSWR			3	:1

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
直流电压 DC Voltage		36	38	V DC
直流电流 DC Current		5		A
功耗 Power Consumption		180		W
防护等级 Ingress Protection Grade	IP-65			
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	SMA Female/N Female	
直流偏置 DC Bias	DSUB-2W2	
尺寸 Size	200*140*90	mm
重量 Weight	≤5	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+38 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

RFout N Female

DC Supply DSUB-2W2

RFIn SMA Femmale

Indicator light

主要功能 Key Features:

参数 Parameter	特点 Advantages
内置保护功能 Protection functions	1,Over TEM:≥+55°C shutdown 2,Over DC voltage:≥38V shutdown 3,Over current:≤20A shutdown 4,Load VSWR protection:The unit disables RF when reverse power exceeds the safe level of 3:1 VSWR or reduces power by 6dB
冷却系统 Cooling system	Built in Cooling system,forced air cooling

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	°C
存储温度 Non-operating Temperature*	-50		+70	°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			

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

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA0.4G6G-45-45-WATERPROOF	Power amplifier 0.4-6 GHz,Gain:45dB,Psat:45dBm,+36V DC,Without Heatsink	Rev.1.1