

Power Amplifier

0.5-2.5GHz /65dB Gain/50 dBm Psat

Model: TLPA0.5G2.5G-65-50

TLPA0.5G2.5G-65-50 is a power amplifier with a typical small signal gain of 65 dB and a nominal Psat of 50 dBm across the frequency range of 0.5 to 2.5 GHz. The DC power requirement for the amplifier is +28 VDC/14 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.5-2.5GHz
- Gain: 65dB Typ
- Output Power Psat: 50dBm Typ
- Good Power and Gain Flatness
- 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	0.5		2.5	GHz
小信号增益 Small Signal Gain	62	65		dB
增益平坦度 Gain Flatness		±3	±4	dB
增益调节范围(VVA) Gain Adjustment Range	25	30		dB
噪声系数 Noise Figure		10	15	dB
线性输出功率 Output P1dB	45	46		dBm
饱和输出功率 Output Psat	49.5	50		dBm
功放使能/关闭时间 PA Enable/ Disable Time		5		us
输入驻波 Input VSWR		1.5	2.0	:1
直流电压 DC Voltage		+28	+30	V DC
静态电流 Quiescent Current		1		A
饱和电流 Saturation Current		12	14	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	SMA Female/SMA Female	
直流供电接口 DC Power Supply Connector	D-SUB-15PIN	
尺寸 Size	220*150*23.5	mm
重量 Weight	1200	g

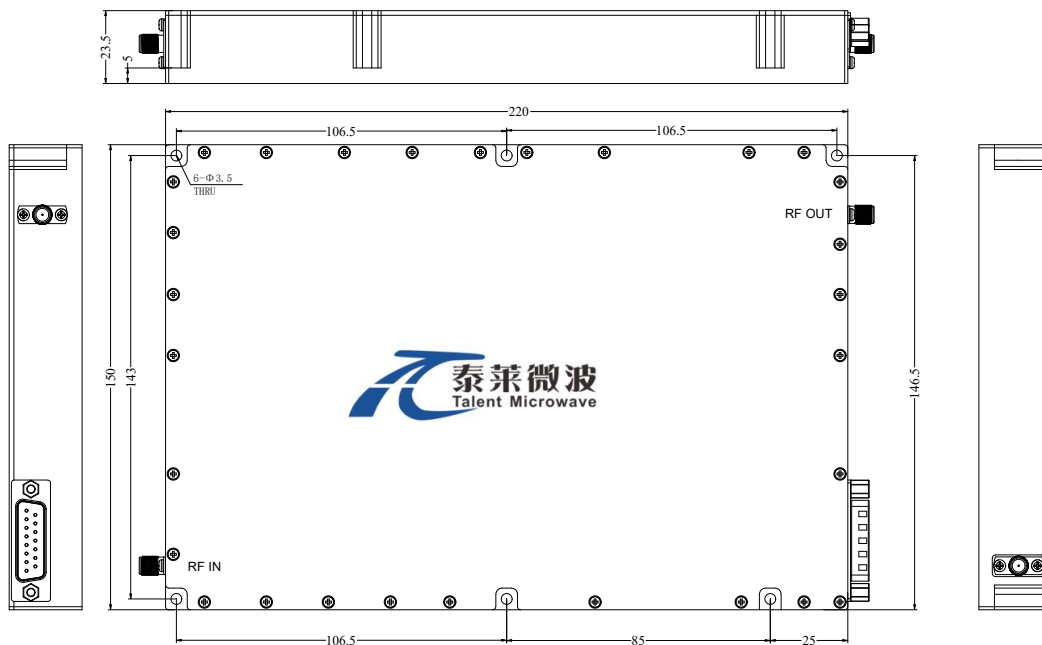
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	+10 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.

直流供电接口 DC Supply Connector(D-SUB15):

引脚 Pin	名称 Name	功能 Function
1	VCC	+26.0-30.0VDC
2	VCC	+26.0-30.0VDC
3	VCC	+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	RX	RS-232 Input
7	TX	RS-232 Output
8	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High)
9	RESET	Resets PA when logic LOW is applied and released (Internally Pulled-High)
10	VVA	0-5V DC
11	Over Temperature	When the temperature of the case exceeds 85 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
12	Over VSWR	VSWR FAULT:(TTL High= Fault, TTL Low =Normal)
13	Over Input	Input FAULT:(TTL High= Fault, TTL Low =Normal)
14	VCC	+26.0-30.0VDC
15	VCC	+26.0-30.0VDC
16	GND	Ground
17	GND	Ground
18	GND	Ground
19	NC	Not connected
20	NC	Not connected
21	NC	Not connected
22	NC	Not connected
23	NC	Not connected
24	Over Current	Current FAULT:(TTL High= Fault, TTL Low =Normal)
25	Over Voltage	Voltage FAULT:(TTL High= Fault, TTL Low =Normal)

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*	-30		+60	°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
TLPA0.5G2.5G-65-50	Power amplifier 0.5-2.5GHz, Gain:65dB,Psat:50dBm,+28V DC,Without Heatsink	Rev.1.0
TLPA0.5G2.5G-65-50-HS	Power amplifier 0.5-2.5GHz, Gain:65dB,Psat:50dBm,+28V DC,With Heatsink	Rev.1.0