

Power Amplifier

13.75-14.5GHz/55dB Gain/55dBm Psat

Model: TLPA13.75G14.5G-55-55

TLPA13.75G14.5G-55-55 is a power amplifier with a minimum gain of 55 dB and a minimum Psat of 55 dBm across the frequency range of 13.75 to 14.5 GHz. The DC power requirement for the amplifier is +28 VDC/2500 W. The input port configuration offers coax adapter structure with SMA female and output port is WR62.

Features:

- Frequency range: 13.75-14.5GHz
- Gain: 55dB Min
- Output Power Psat: 55dBm Min
- 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	13.75		14.5	GHz
增益 Gain	55			dB
增益平坦度 Gain Flatness		±3.5		dB
线性增益调节范围 Linear Gain Adjustment Range		31.5		dB
线性增益调节步进 Linear Gain Adjustment Step		0.5		dB
饱和输出功率 Output Psat	55			dBm
杂散 Spurious@Pout=55dBm			-60	dBc
二次谐波 2nd Harmonics@Pout=55dBm			-20	dBc
输入驻波 Input VSWR			2.0	:1
直流电压 DC Voltage		+28		V DC
功耗 Power Consumption			2500	W
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/WR62	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/ SMA Female	40±0.5dB
直流供电接口 DC Power Supply Connector	Y50DX-1804	PIN1~2:+28V PIN3~4:GND
尺寸 Size	305*342*128	mm
重量 Weight	≤25	g

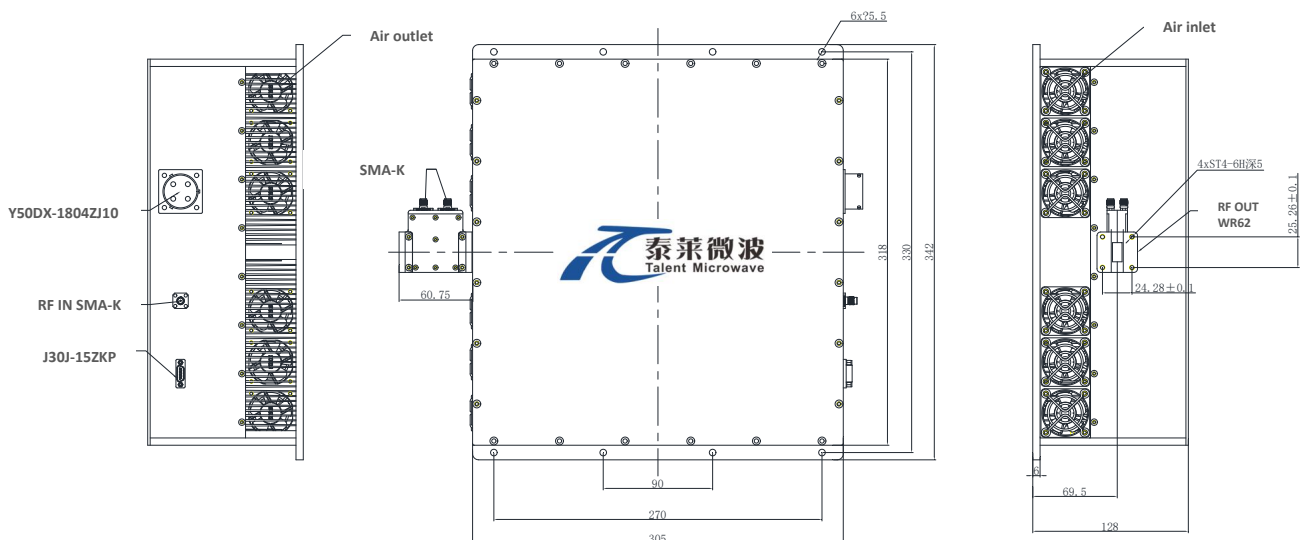
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+28 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



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

控制接口 Control Connector:

J30J-15ZKP引脚定义

引脚 Pin	功能 Function
1~6	0.5/1/2/4/8/16 Decay control bit
7	Power On/Off
8	RF On/Off
9~15	GND

*Note: All control levels are effective at the high level, while the low level and suspended level are invalid.

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)	20g,11ms,saw-tooth			
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
TLPA13.75G14.5G-55-55	Power amplifier, 13.75-14.5GHz, Gain:55dB,Psat:55dBm,+28V DC,With Heatsink	Rev.1.1