

Power Amplifier

3-30MHz/48dB Gain/45dBm Psat

Model: TLPA3M30M-45-45-HS

TLPA3M30M-45-45-HS is a power amplifier with a minimum gain of 48 dB and a minimum Psat of 45 dBm across the frequency range of 3 to 30 MHz. The DC power requirement for the amplifier is +28 VDC/5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 3-30MHz
- Gain: 48dB Min
- Output Power Psat: 45dBm 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	3		30	GHz
增益 Gain	48	50		dB
增益平坦度 Gain Flatness		±1	±2	dB
增益调节范围 Gain Adjustment Range (7 bits, 0.25 dB step)			31.75	dB
线性输出功率 Output P1dB	43	44		dBm
饱和输出功率 Output Psat	45	46		dBm
输入驻波 Input VSWR		1.5	2.0	:1
直流电压 DC Voltage		+28		V DC
直流电流 DC Supply Current		5		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	
直流偏置 DC Bias	Feedthru Capacitor	
控制接口 Control Interface	J30J-9	
尺寸 Size	180*129*63.5	mm
重量 Weight	2600	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	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

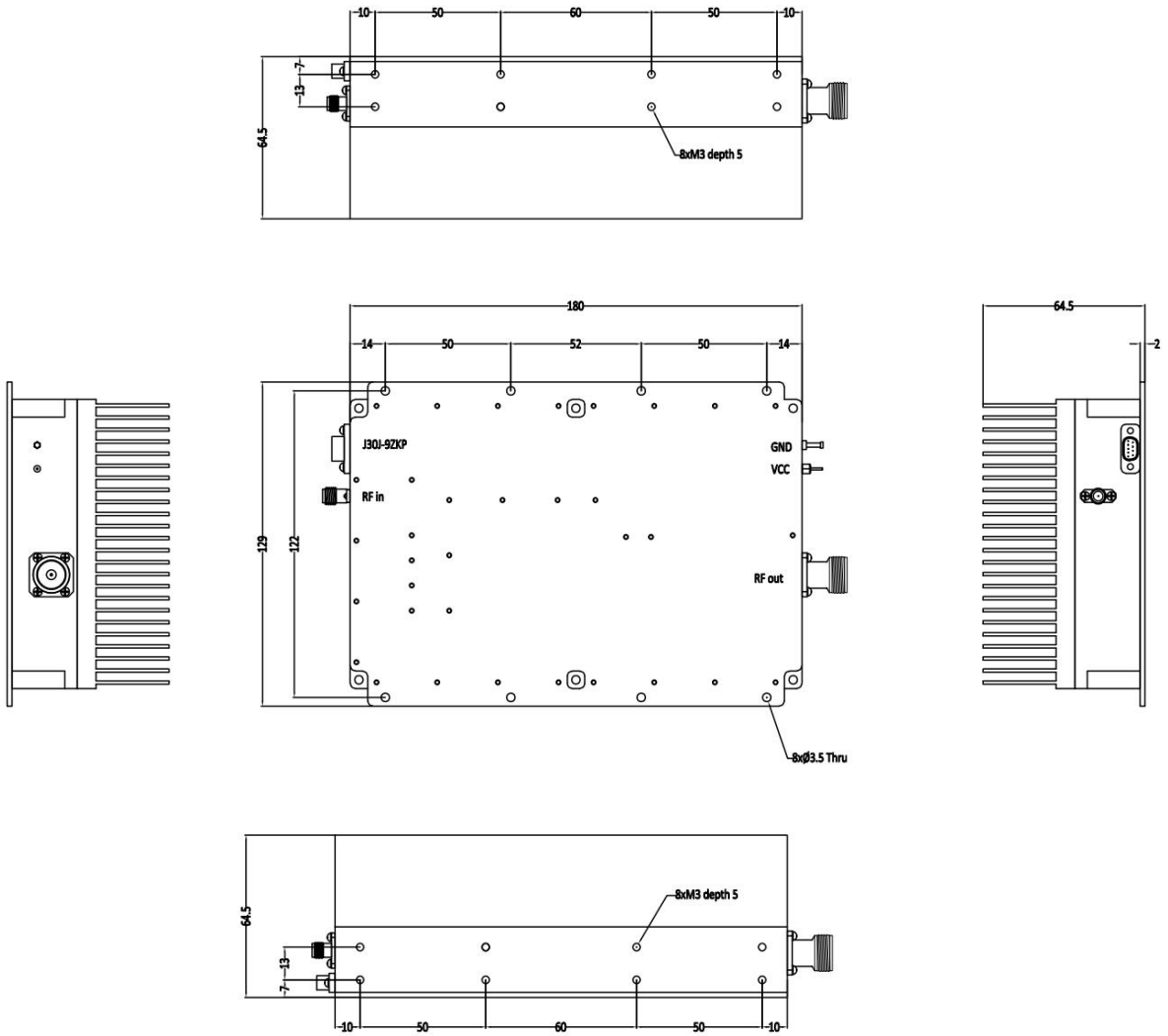


控制接口连接器 Control Interface Connector(J30J-9 Female):

引脚 Pin	名称 Name	功能 Function
1	EN	High level (or high impedance) turns the amplifier on; low level turns it off.
2	Over VSWR	When the external VSWR of the power amplifier output is greater than 5, the power amplifier is turned off, and this pin will output a high level. When the external VSWR is less than 5, this pin outputs a low level.
3	Over TEM	When the temperature of the case exceeds 80 °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.
4	Over Voltage	When the supply voltage exceeds 32V, the amplifier shuts down, and this pin outputs a high level. When the supply voltage is below 32V, this pin outputs a low level.
5	Over Load	When the input power exceeds 3 dBm, the amplifier shuts off, and this pin outputs a high level. When the input power is below 3 dBm, this pin outputs a low level.
6	Reset	When the power amplifier triggers VSWR protection, the power amplifier will shut down and enter a state lock. Giving this pin a low pulse of 10us will restart the power amplifier. Only VSWR protection can be reset.
7	RX	RS232 Data Receiver
8	TX	RS232 Data Sender
9	GND	GND

*Note: The control voltage is 3.3V.

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*	-40		+50	°C
存储温度 Non-operating Temperature*	-50		+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
TLPA3M30M-45-45-HS	Power amplifier 3-30MHz, Gain:48dB,Psat:45dBm,+28V DC,With Heatsink	Rev.1.1