

Power Amplifier

20MHz-1GHz /50dB Gain/43dBm Psat

Model: TLPA20M1G-50-43

TLPA20M1G-50-43 is a power amplifier with a typical small signal gain of 50 dB and a nominal Psat of 43 dBm across the frequency range of 20MHz to 1GHz. The DC power requirement for the amplifier is +24 VDC/3 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 20MHz-1GHz
- Gain: 50dB Typ
- Output Power Psat: 43dBm 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	0.02-1			GHz
小信号增益 Small Signal Gain	46	50		dB
增益平坦度 Gain Flatness		±1	±2	dB
线性输出功率 Output P1dB	39	41		dBm
饱和输出功率 Output Psat	40	43		dBm
噪声系数 Noise Figure		3.5		dB
输入驻波 Input VSWR		1.5	2	:1
开关时间 Switching Time		5		us
直流电压 DC Voltage	22	24	28	V DC
直流电流 DC Supply Current		3		A
阻抗 Impedance	50			Ohms

机械特性 Mechanical Specifications:

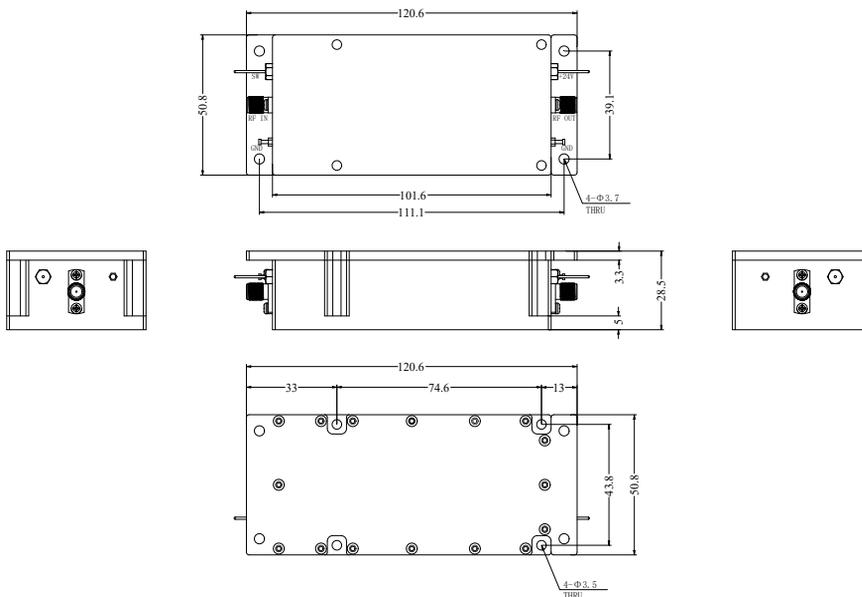
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	120.6*50.8*28.5(Without Heatsink) 120.6*80*108.5(With Heatsink)	mm
重量 Weight	150	g

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	-3 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

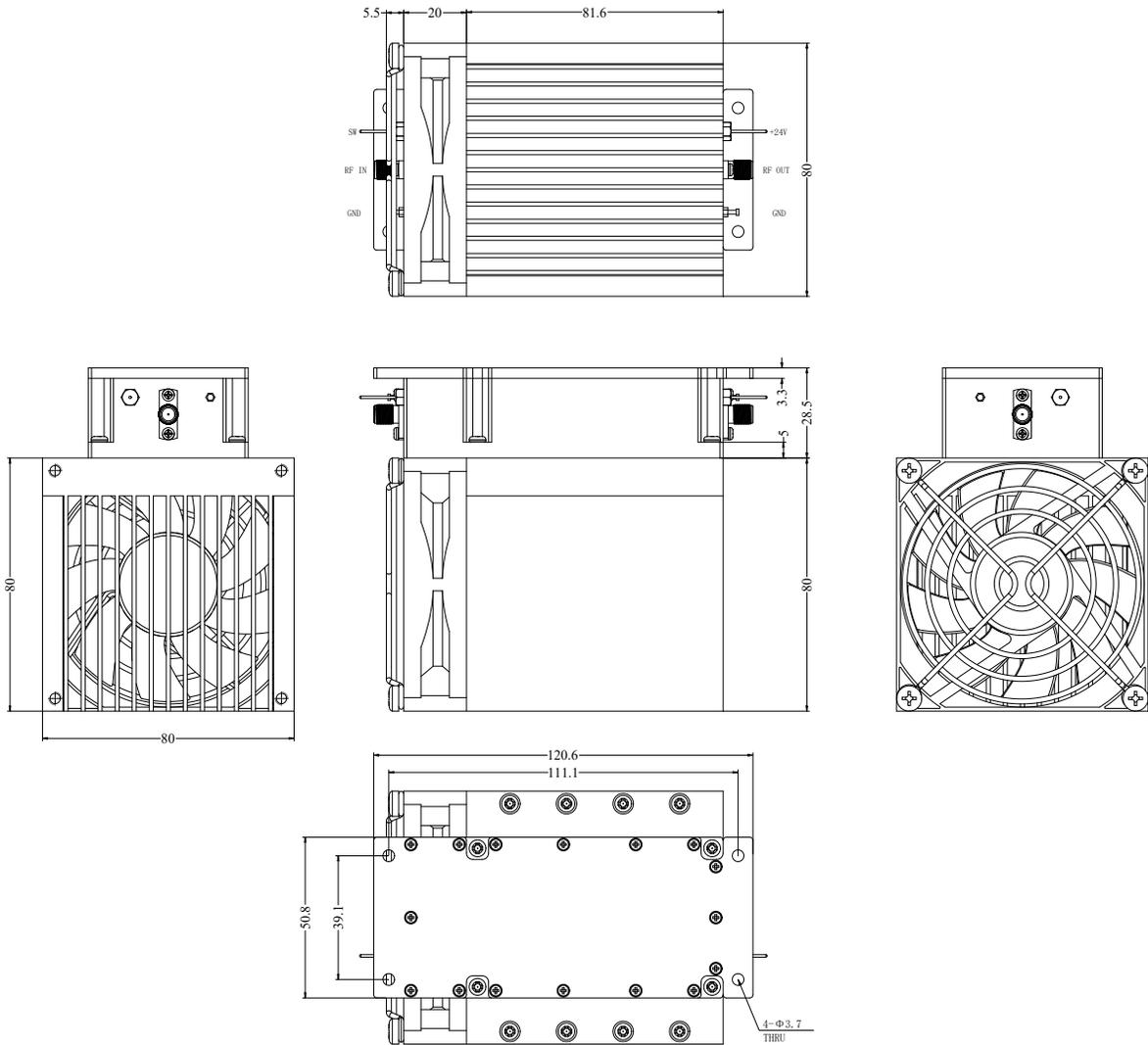
外形图 Outline Drawing:

Unit:mm



外形图 Outline Drawing:

Unit:mm



名称 Name	功能 Function
+24V	+22.0-28.0VDC
SW	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground
GND	Ground
GND	Ground

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
TLPA20M1G-50-43	Power amplifier 20MHz-1GHz, Gain:50dB, Psat:43dBm, +24V DC, Without Heatsink	Rev.1.1
TLPA20M1G-50-43-HS	Power amplifier 20MHz-1GHz, Gain:50dB, Psat:43dBm, +24V DC, With Heatsink	Rev.1.1