

Pulsed Power Amplifier

170-220MHz/68dB Gain/68dBm Psat

Model: TLPA170M220M-68-68-P

TLPA170M220M-68-68-P is a pulsed power amplifier with a typical small signal gain of 68 dB and a nominal Psat of 68 dBm across the frequency range of 170 to 220 MHz. The DC power requirement for the amplifier is +48 VDC/10 KW. The input port configuration offers coax adapter structure with N type and output port configuration offers M23.

Features:

- Frequency range: 170-220MHz
- Gain: 68dB Typ
- Output Power Psat: 68dBm Typ
- Protection: Over TEM, over voltage, under voltage, over 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	170		220	MHz
工作模式 Working Mode		Pulse		
小信号增益 Small Signal Gain		68		dB
增益平坦度 Gain Flatness			±1.5	dB
饱和输出功率 Output Psat		68		dBm
脉冲功率顶降 Power Drop			0.6	dB
相位噪声 Phase Noise@100Hz			-80	dBc/Hz
杂散 Spurious			-70	dBc
谐波抑制 Harmonic		-20		dBc
输入滤波 Input Filtering@150~250MHz	-20			dB
输入滤波 Input Filtering@100~300MHz	-40			dB

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
占空比 Duty Cycle			20	%
脉冲宽度 Pulse Width	1		100	us
上升/下降沿 Rise/Fall Time			100	ns
驻波 VSWR			2	:1
直流电压 DC Voltage		48		V DC
功耗 Power consumption			10	kW
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	N Type	
供电接口 Power Supply Connector	M23	
低频信号接口 LF Signal Connector	M12	
防护等级 Ingress Protection Grade	IP-65	
尺寸 Size	600*400*100	mm
重量 Weight	20	kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+54 V DC
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; Tolerance:±0.1mm



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

主要功能 Key Features:

参数 Parameter	特点 Advantages
显示功能 Display functions	1, Output/reflected power 2, DC voltage 3, DC power consumption 4, Temperature
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Under voltage 4, Over VSWR: >2:1, shut down
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*	-35		+65	°C
存储温度 Non-operating Temperature*	-45		+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
TLPA170M220M-68-68-P	Pulsed Power Amplifier 170-220MHz, Gain:68dB,Psat:68dBm,+48V DC,With Heatsink	Rev.1.0