

Power Amplifier

0.5-3GHz/50dB Gain/50dBm Psat

Model: TLPA0.5G3G-50-50

TLPA0.5G3G-50-50 is a power amplifier with a minimum gain of 50 dB and a nominal Psat of 50dBm across the frequency range of 0.5 to 3GHz. The DC power requirement for the amplifier is +32 VDC/10A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.5-3GHz
- Gain: 50dB Min
- Output Power Psat: 50dBm Typ
- Protection: Over TEM protection
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.5		3	GHz
Gain	50			dB
Gain flatness			3±1	dB
Input Power			3±1	dBm
Output Psat*		100±1		W
Spurious			-65	dBc
Harmonics@Pout=100W			-10	dBc
Input VSWR			2	:1
DC Voltage		32		V DC
DC Supply Current		10	13.5	A
Impedance		50		Ohms

Note: The output power is more than 93W at 3GHz.

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Supply Connector	5569-4.2mm 2*3 Female	
Power amplifier PTT switch port	The power amplifier is set to be off by default, while +3.3 to +5V is enabled.	
Size	238*128*25.3	mm
Weight	≤2	Kg

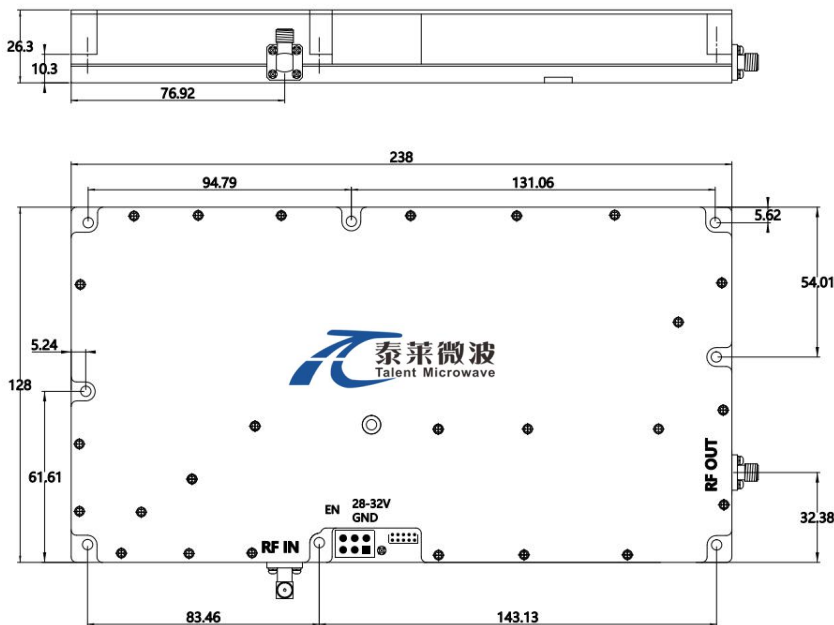
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+33 V
RF Input Power	+6 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



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

Key Features:

Parameter	Advantages
Protection functions	Over TEM: $\geq +80^{\circ}\text{C}$ shutdown

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	$^{\circ}\text{C}$
Non-operating Temperature*	-30		+60	$^{\circ}\text{C}$
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave, 3 axis both directions			

*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA0.5G3G-50-50	Power amplifier 0.5-3GHz, Gain:50dB,Psat:50dBm,+32V DC,Without Heatsink	Rev.1.1
TLPA0.5G3G-50-50-HS	Power amplifier 0.5-3GHz, Gain:50dB,Psat:50dBm,+32V DC,With Heatsink	Rev.1.1