

Power Amplifier

1-2.7GHz/52dB Gain/52dBm Psat

Model: TLPA1G2.7G-52-52-P

TLPA1G2.7G-52-52-P is a power amplifier with a typical gain of 52 dB and a minimum Psat of 52 dBm across the frequency range of 1 to 2.7 GHz. The DC power requirement for the amplifier is +48 VDC/10 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Features:

- Frequency range:: 1-2.7 GHz
- Gain: 52dB Typ
- Output Power Psat: 52dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1		2.7	GHz
Working Mode	PULSE ONLY&CW/PULSE compatible			
Input Signal Mode	CW/PULSE			
Gain	50	52		dB
Gain Flatness		±3	±4	dB
Output Psat(CW)	48	49	50	dBm
Output Psat	52	53		dBm
Spurious@Pout=52dBm			-60	dBc
Harmonic@Pout=52dBm		-15	-10	dBc
Input VSWR		1.5	2	:1
DC Voltage	+46	+48	+50	V DC
DC Supply Current		2	10	A
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
DC Supply Connector	DB9	
Size	200*130*25	mm
Weight	500	g

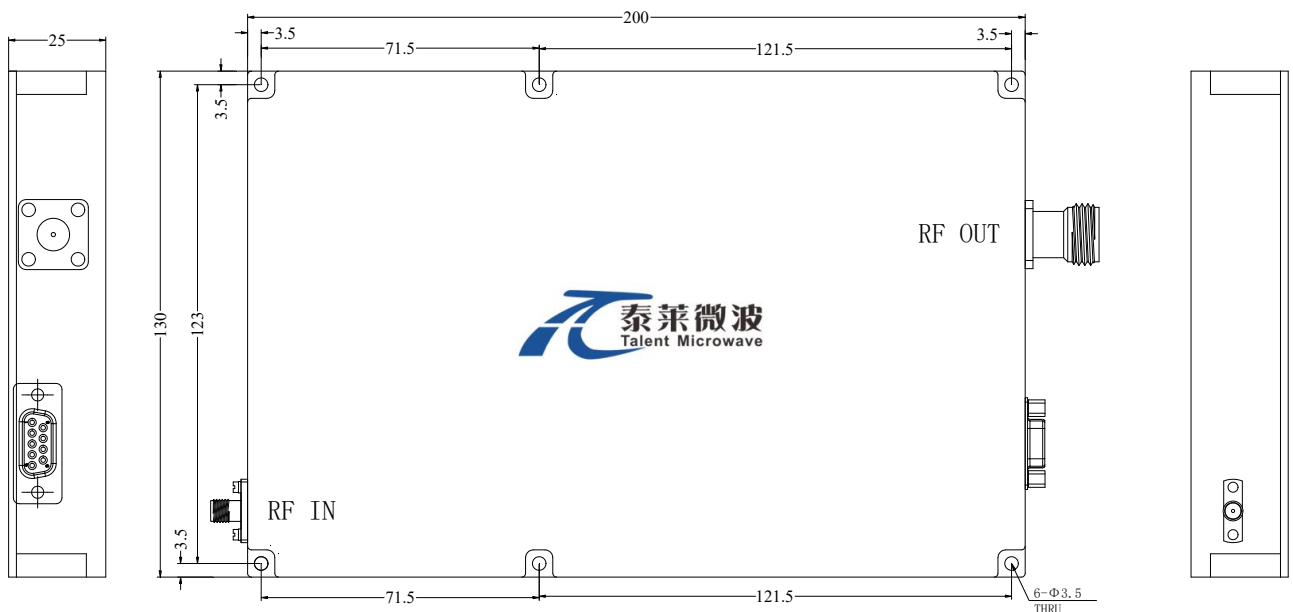
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+50 V
RF Input Power	+5 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.

DC Supply Connector (DSUB-9 Female):

Pin	Name	Function
1	+48V	Power supply positive,+26.0-30.0VDC
2	+48V	Power supply positive,+26.0-30.0VDC
3	+48V	Power supply positive,+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
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	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.
8	Over TEM	When the temperature of the case exceeds 85 °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.
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	-30		+60	°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
TLPA1G2.7G-52-52-P	Power amplifier 1-2.7GHz, Gain:52dB,Psat:52dBm,+48V DC,Without Heatsink	Rev.1.1
TLPA1G2.7G-52-52-P-HS	Power amplifier 1-2.7GHz, Gain:52dB,Psat:52dBm,+48V DC,With Heatsink	Rev.1.1