

Power Amplifier

1-2GHz/40dB Gain/45 dBm Psat

Model: TLPA1G2G-40-45

TLPA1G2G-40-45 is a power amplifier with a minimum gain of 40 dB and a typical Psat of 45 dBm across the frequency range of 1 to 2 GHz. The DC power requirement for the amplifier is +36 VDC/1.2 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-2GHz
- Gain: 40dB Min
- Output Power Psat: 45dBm Typ
- 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	GHz
Gain	40	43		dB
Gain Flatness		±1	±1.5	dB
Outout P1dB	43	44		dBm
Output Psat	44	45		dBm
IMD3@ 37dBm/Tone, 7MHz space	30			dBc
Harmonic@Pout=43dBm		-17	-15	dBc
Input VSWR		1.3	1.5	:1
DC Voltage	+34	+36	+38	V DC
DC Supply Current		1.2	5	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Supply Connector	J30J-9ZKSP	
Size	138*97*20	mm
Weight	700	g

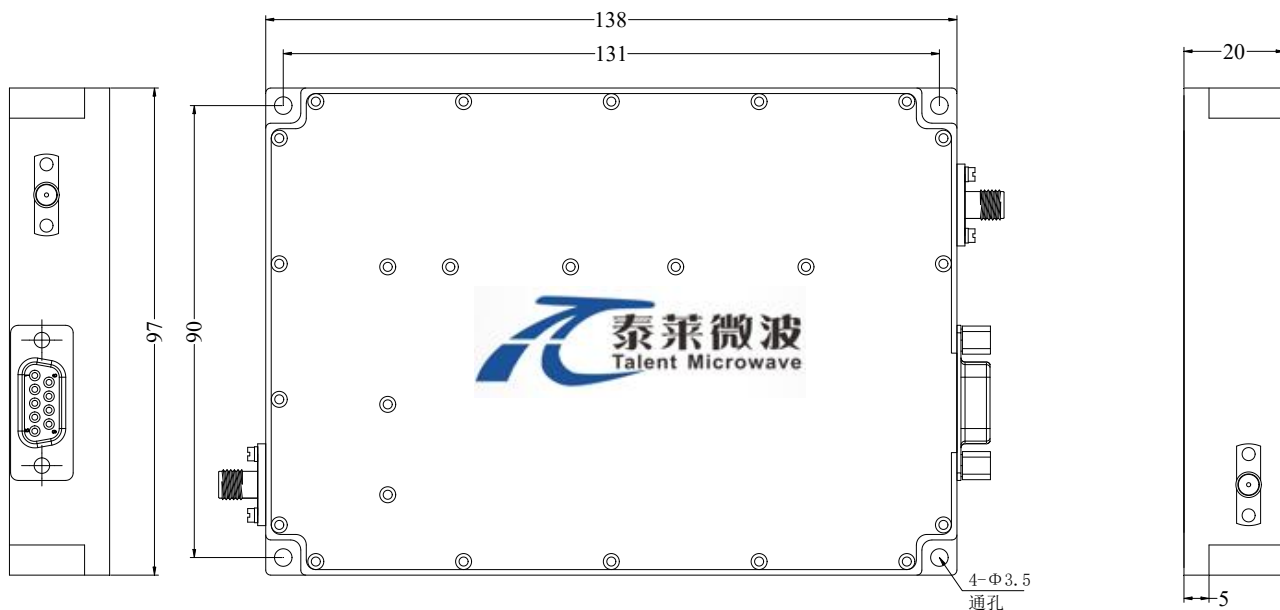
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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



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

DC Supply Connector(J30J-9ZKSP):

Pin	Name	Function
1	VCC	Power supply positive,+34.0-38.0VDC
2	VCC	Power supply positive,+34.0-38.0VDC
3	VCC	Power supply positive,+34.0-38.0VDC
4	GND	Power supply negative
5	GND	Power supply negative
6	NC	Not connected
7	Over TEM	When the temperature of the case exceeds 70 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 60 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
8	NC	Not connected
9	+28V	(Or when suspended): Turn on the amplifier; turn off the amplifier at low voltage.

*Note: TTL is 5V.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	°C
Non-operating Temperature*	-50		+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
TLPA1G2G-40-45	Power amplifier 1-2GHz, Gain:40dB,Psat:43dBm,+36V DC,Without Heatsink	Rev.1.1
TLPA1G2G-40-45-HS	Power amplifier 1-2GHz, Gain:40dB,Psat:43dBm,+36V DC,With Heatsink	Rev.1.1