

Power Amplifier

0.1-20MHz/45dB Gain/45dBm Psat

Model: TLPA0.1M20M-45-45

TLPA0.1M20M-45-45 is a power amplifier with a minimum small signal gain of 45 dB and a minimum Psat of 45 dBm across the frequency range of 0.1 to 20 MHz. The DC power requirement for the amplifier is +28 VDC/3.5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.1-20MHz
- Gain: 45dB Min
- Output Power Psat: 45dBm 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	0.1-20			MHz
Small Signal Gain	45	47		dB
Gain Flatness		±1	±2	dB
Output P1dB		42		dBm
Output Psat	45	45.5		dBm
Input VSWR		1.5	2.0	:1
DC Voltage		28	30	V DC
Static Current		2.5		A
Saturation Current		3.5	4	A
Impedance	50			Ohms

Mechanical Specifications:

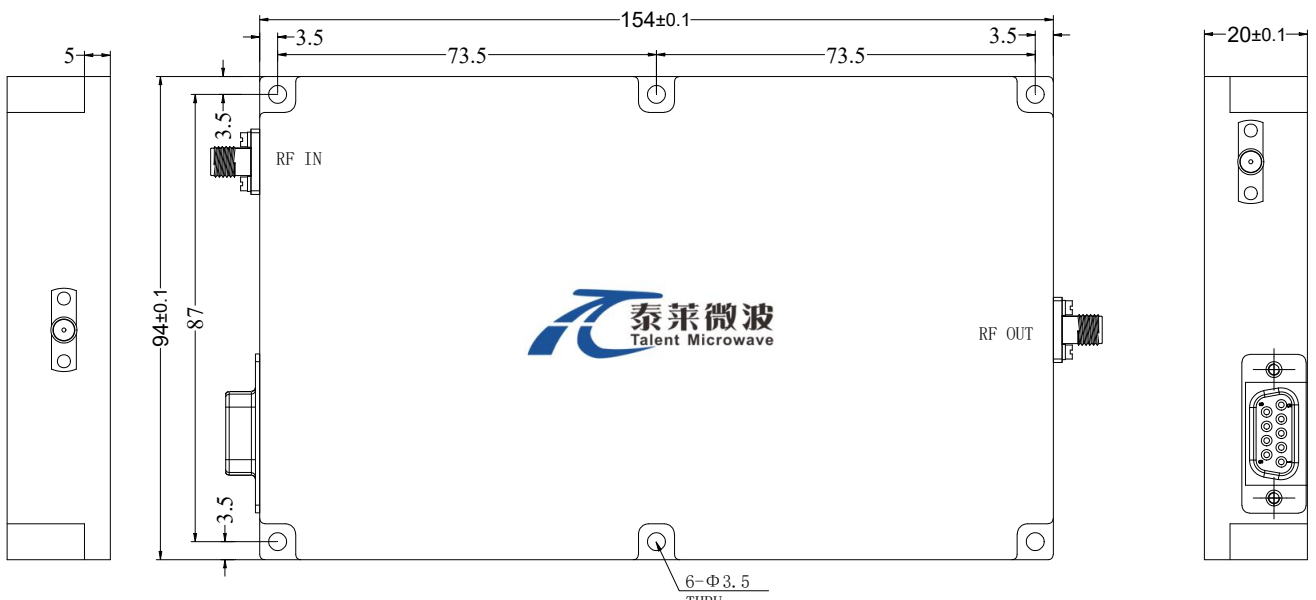
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	D-SUB-9	
Size	154*94*20(Without Heatsink) 264*140*82(With Heatsink)	mm
Weight	500	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+5 dBm
ESD sensitivity (HBM)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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

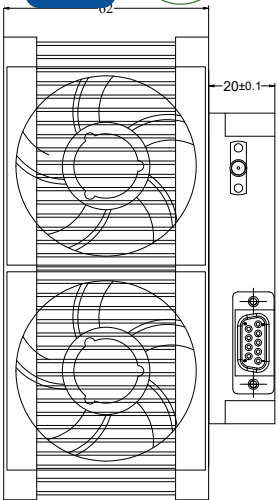
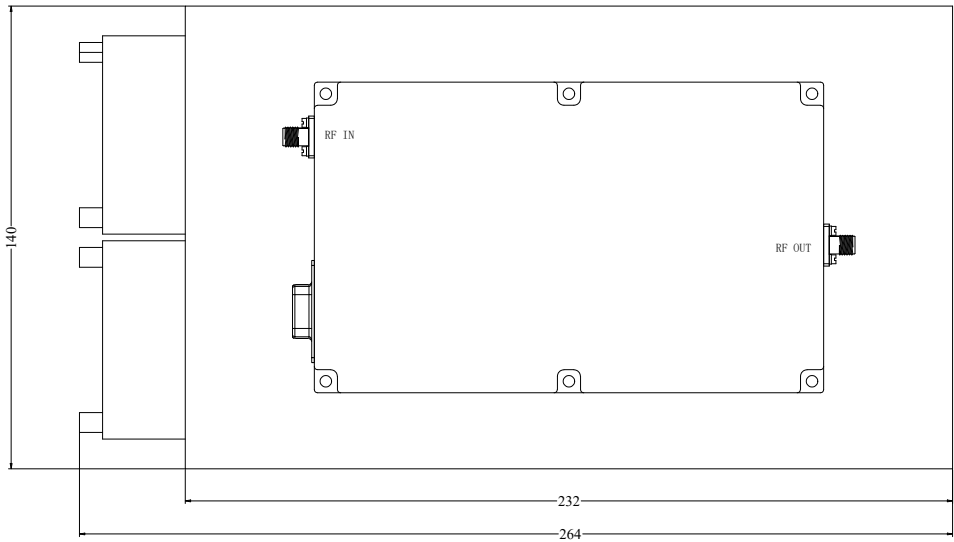


OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Outline Drawing:

Unit:mm

Regulatory Compliance:



DC Supply Connector (DSUB-9 Female):

Pin	Name	Function
1~3	VCC	Power supply positive,+26.0-30.0VDC
4~5	GND	Ground
6	NC	Not connected
7	Over Temperature	When the temperature of the case exceeds 75 °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.
8	NC	Not connected
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to Ground

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
TLPA0.1M20M-45-45	Power amplifier 0.1-20MHz,Gain:45dB,Psat:45dBm, +28V DC,Without Heatsink	Rev.1.0
TLPA0.1M20M-45-45-HS	Power amplifier 0.1-20MHz,Gain:45dB,Psat:45dBm, +28V DC,With Heatsink	Rev.1.0