

Power Amplifier

30MHz-1GHz/43dB Gain/43dBm Psat

Model: TLPA30M1G-43-43

TLPA30M1G-43-43 is a power amplifier with a minimum gain of 43 dB and a minimum Psat of 43 dBm across the frequency range of 30MHz to 1 GHz. The DC power requirement for the amplifier is +28 VDC/1 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 30MHz-1GHz
- Gain: 43dB Min
- Output Power Psat: 43dBm 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	30MHz		1GHz	
Gain	43	45		dB
Gain Flatness		±2	±3	dB
Outout P1dB	41			dBm
Output Psat	43	44		dBm
Harmonics		-10		dBc
Input VSWR		1.5	2.0	:1
DC Voltage		+28	+30	V DC
DC Supply Current		1	6	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Power Supply Connector	DSUB-9	
Size	170*80*20	mm
Weight	500	g

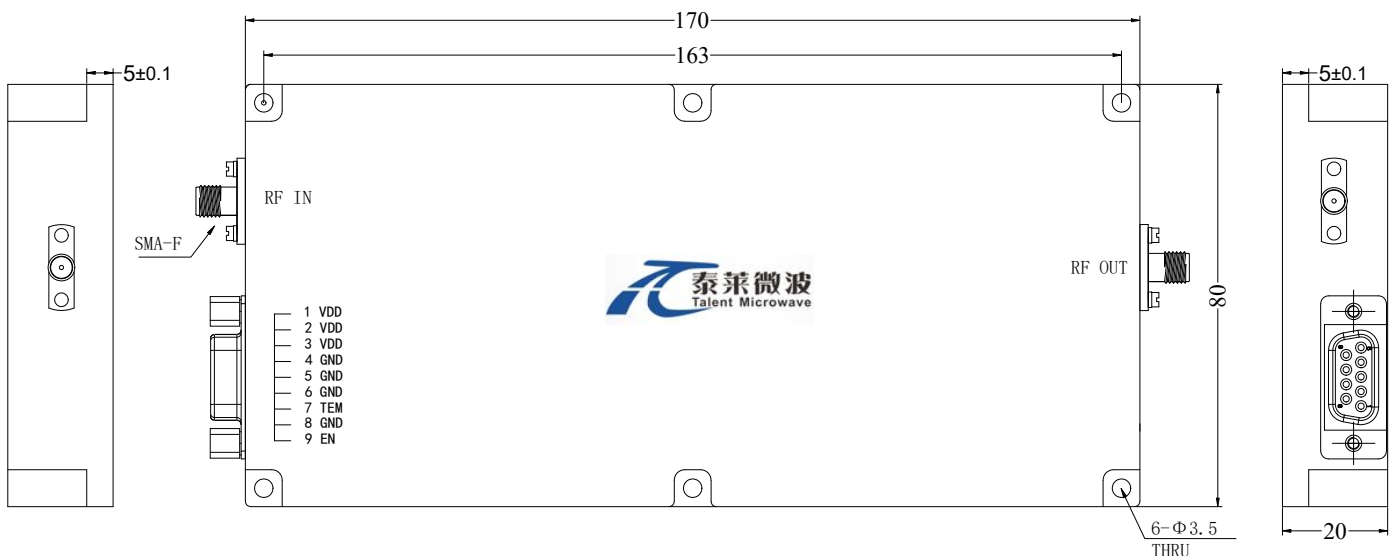
Absolute Maximum Ratings:

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



Outline Drawing:

Unit:mm; Tolerance:±0.1mm



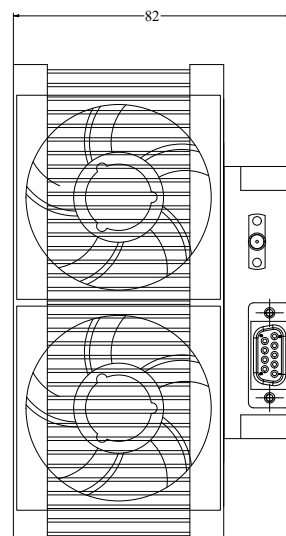
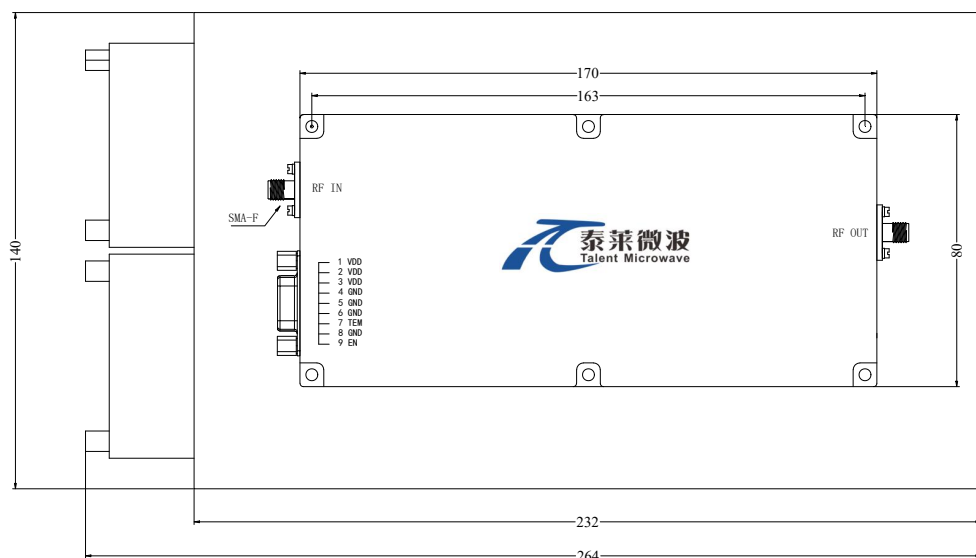
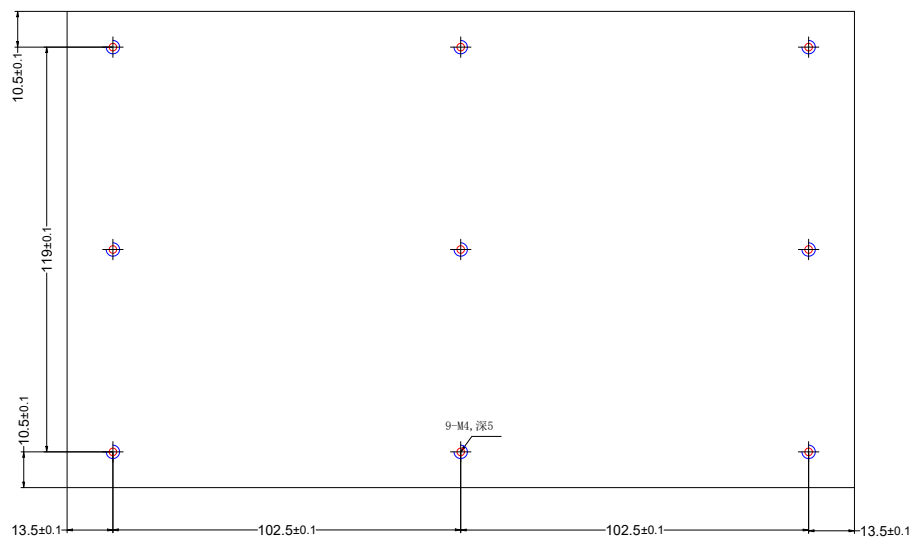
*****Heat Sink Required During Operation**



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

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Fan power supply

Red line	Power supply positive, +24.0-28.0VDC DC current: 0.4A
Black line	Ground

DC Supply Connector(DSUB-9 Female):

Pin	Name	Function
1	+28V	+26.0-30.0VDC
2	+28V	+26.0-30.0VDC
3	+28V	+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	NC	Not connected
7	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.
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)		20g,11ms,saw-tooth		
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
TLPA30M1G-43-43	Power amplifier 0.03-1GHz, Gain:43dB,Psat:43dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA30M1G-43-43-HS	Power amplifier 0.03-1GHz, Gain:43dB,Psat:43dBm,+28V DC,With Heatsink	Rev.1.1