Suzhou Talent Microwave,Inc
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Power Amplifier

0.5-2.5GHz /65dB Gain/50 dBm Psat Model: TLPA0.5G2.5G-65-50

TLPA0.5G2.5G-65-50 is a power amplifier with a typical small signal gain of 65 dB and a nominal Psat of 50 dBm across the frequency range of 0.5 to 2.5 GHz. The DC power requirement for the amplifier is +28 VDC/14 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Wide Band: 0.5-2.5GHz
- Gain: 65dB Typ
- Output Power Psat: 50dBm 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		0.5-2.5		GHz
Small Signal Gain	62	65		dB
Gain Flatness		±3	±4	dB
Gain Adjustment Range	25	30		dB
Noise Figure		10	15	dB
Output P1dB	45	46		dBm
Output Psat	49.5	50		dBm
PA Enable/ Disable Time		5		us
Input VSWR		1.5	2.0	:1
Output VSWR				:1
DC Voltage		28	30	V DC
Quiescent Current		1		A
Saturation Current		12	14	A
Impedance		50		Ohms

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Mechanical Specifications:

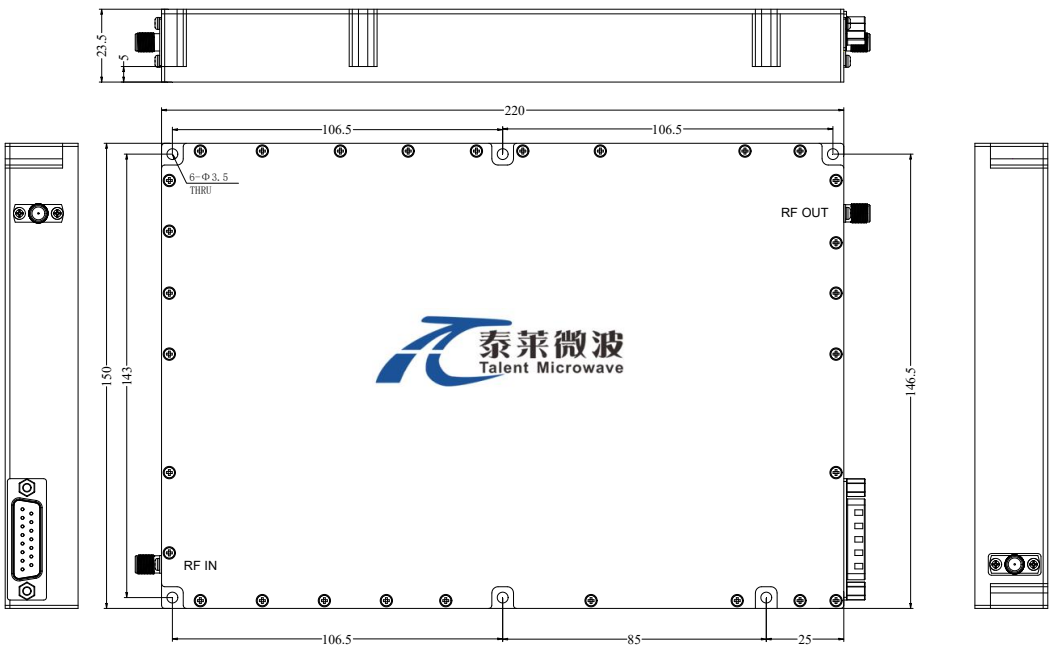
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	D-SUB-15PIN	
Size	220*150*23.5	mm
Weight	1200	g

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



***Heat Sink Required During Operation

OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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DC Supply Connector(D-SUB15):

Pin #	Name	Function
1	VCC	+26.0-30.0VDC
2	VCC	+26.0-30.0VDC
3	VCC	+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	RX	RS-232 Input
7	TX	RS-232 Output
8	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High)
9	RESET	Resets PA when logic LOW is applied and released (Internally Pulled-High)
10	VVA	0-5V DC
11	Over Temperature	When the temperature of the case exceeds 85 ℃, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 ℃, the power amplifier will return to normal operation, and this pin will be pulled low.
12	Over VSWR	VSWR FAULT:(TTL High= Fault, TTL Low =Normal)
13	Over Input	Input FAULT:(TTL High= Fault, TTL Low =Normal)
14	VCC	+26.0-30.0VDC
15	VCC	+26.0-30.0VDC
16	GND	Ground
17	GND	Ground
18	GND	Ground
19	NC	Not connected
20	NC	Not connected
21	NC	Not connected
22	NC	Not connected
23	NC	Not connected
24	Over Current	Current FAULT:(TTL High= Fault, TTL Low =Normal)
25	Over Voltage	Voltage FAULT:(TTL High= Fault, TTL Low =Normal)

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Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	℃
Non-operating Temperature*	-30		+60	℃
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	Desciption	Revision
TLPA0.5G2.5G-65-50	Power amplifier 0.5-2.5GHz,Gain:65dB,Psat:50dBm, +28V DC,Without Heatsink	Rev.1.0
TLPA0.5G2.5G-65-50-HS	Power amplifier 0.5-2.5GHz,Gain:65dB,Psat:50dBm, +28V DC,With Heatsink	Rev.1.0