TMPA-30006000-4527

Power Amplifier | 30 to 60 GHz, Gain 45dB, Pout 27dBm, 1.85mm

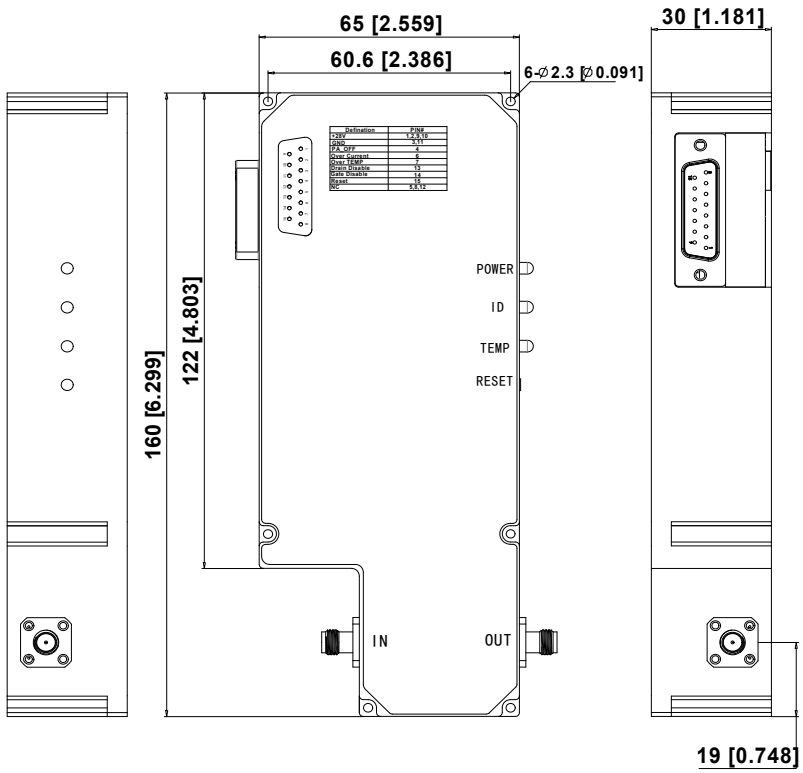
Product Features

- Ultra Wideband Power Amplifier
- Small Signal Gain 50dB typical
- Output Saturation Power 27dBm Typical
- Supply Voltage +28Vdc
- 50 Ohm Matched Input/Output
- Overcurrent Protection

SPECIFICATIONS

Parameters		Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		30	-	45	45	-	60	GHz
Small Signal Gain		45	50	-	50	55	-	dB
Gain Flatness		-	±3.0	-	-	±5.0	-	dB
Gain Variation Over Temp. (-20℃ to +60℃)		-	±4.0	-	-	±4.0	-	dB
Input VSWR		-	2.5	3	-	2.5	3	:1
Output Power(P1dB)		-	22	-	-	20	-	dBm
Saturated Output Power(Psat)		23	27	-	21	23	-	dBm
Supply Current(Vcc=+28Vdc)		-	1	2.5	-	1	2.5	A
IM3		-	35	-	-	35	-	dBc
RF ON and OFF Speed		3/70 Typ.						µS
Power Added Efficiency(PAE)		-	5	-	-	5	-	%
Time Division Duplexing (TDD) Blanking	**ON**	50 Typ.						µS
	OFF	25 Typ.						µS
Weight		1 Max.						kg
Input/Output Connectors		1.85mm female						

Dimensions: mm[inch]



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Absolute Maximum Ratings	
RF Input Power	-12dBm Max.
Operating Voltage	+30V Max.
Operating Temperature	-20℃～+60℃
Storage Temperature	-50℃～+105℃

Note: Maximum RF input power is set to assure safety of amplifier. Input power may be increased at own risk to achieve full power of amplifier.

Biasing Up Procedure	
Step 1	Connect Ground Pin
Step 2	Connect input and output with 50 Ohm source/load. (in band VSWR 10dB return loss)
Step 3	Connect +28V

Power OFF Procedure	
Step 1	Turn off +28V Biasing
Step 2	Remove RF Connection
Step 3	Remove Ground

Interface Connector: Male D-Sub 15 Pin [the mating male part number: 173-E15-113R001]

PIN No.	Name	Function	Initial State	Descriptions	Applied
1,2,9,10	VDD	Power Supply	+28V	+28Vdc is supply voltage	Yes
3, 11	GND	Ground	GND	Ground	Yes
4	PA_OFF	Indicator	LOW	Amplifier working state, high level is off	Yes
5	RF Input Over Drive	Indicator	LOW	Pin will be latched to logic HIGH when input signal is over limit	No
6	Over Current	Indicator	LOW	Pin will be latched to logic HIGH when Current Limit is reached	Yes
7	Over Temperature	Indicator	LOW	Pin will be latched to logic HIGH when drive over Temperature	Yes
8	ID Balance	Indicator	LOW	Pin will be latched to logic HIGH when an imbalance in the drain current of the combining branches occurs	Yes
12	Switch Disable	Control	HIGH	Applying logic LOW disconnect RF signal of amplifiers	No
13	Drain Disable	Control	HIGH	Applying logic LOW disables Positive Supply Voltage of Amplifiers	Yes
14	Gate Disable	Control	HIGH	Applying logic LOW disables gates of Amplifiers	Yes
15	Reset	Control	HIGH	Resets PA when logic LOW is applied and released (Internally Pulled-High +3.3V)	Yes