



WBPA2429A

2.4 – 2.8 GHz LOW NOISE WIDE BAND POWER AMPLIFIER

REV A
September 2012

Key Features



- 2.4 ~ 2.8 GHz
- 1.50 dB noise figure
- 48.0 dBm Output IP₃
- 39.0 dB Gain
- 39.0 dBm P_{1dB}
- 1.25:1 VSWR
- Single Power Supply
- >34 Years MTBF
- Unconditional Stable
- RoHS Compliant
- ∞:1 Maximum Load Mismatch

Product Description

WBPA2429A integrates WanTcom proprietary low noise amplifier technology, high frequency micro electronic assembly techniques, and high reliability design to realize optimum low noise figure, wideband, high linearity, and unconditional stable performances together. With single DC operation, the amplifier has optimal input and output matching in the specified frequency range at 50-Ohm impedance system. The amplifier has standard SMA connectorized WP-9L gold plated housing.

The amplifier is designed to meet the rugged standard of MIL-STD-202.

Applications

- Mobile Infrastructures
- WiMax
- GPS
- CATV/DBS
- Defense
- Security System
- Measurement
- Fixed Wireless



Specifications

Additional heat sink required for continuous operation

Summary of the electrical specifications WBPA2429A at room temperature

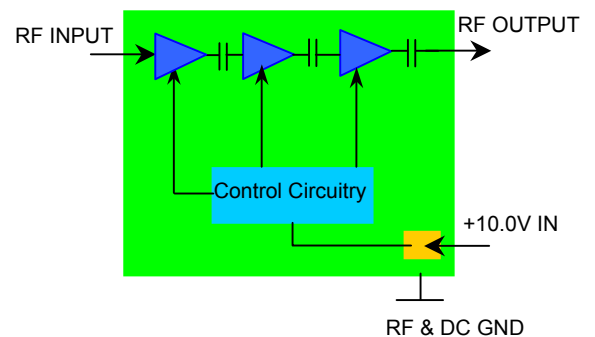
Index	Testing Item	Symbol	Test Constraints	Min	Nom	Max	Unit
1	Gain	S ₂₁	2.4 – 2.8 GHz		39		dB
2	Gain Variation	ΔG	2.4 – 2.8 GHz		+/- 0.5	+/- 1.0	dB
3	Input VSWR	SWR ₁	2.4 – 2.8 GHz		1.25:1	1.5:1	Ratio
4	Output VSWR	SWR ₂	2.4 – 2.8 GHz		1.25:1	1.5:1	Ratio
5	Reverse Isolation	S ₁₂	2.4 – 2.8 GHz	60	70		dB
6	Noise figure	NF	2.4 – 2.8 GHz		1.5	1.8	dB
7	Output P _{1dB} compression	P _{1dB}	2.4 – 2.8 GHz	37	39		dBm
8	Output-Third-Order Interception point	TOIP ₃	Two-Tone, P _o =24 dBm each, 1 MHz separation	46	48		dBm
9	Maximum RF Input Power	P _{IN,MAX}	2.4 – 2.8 GHz			13	dBm
10	Maximum Load Mismatch	SWR _{2,MAX}	2.4 – 2.8 GHz			∞:1	Ratio
11	Current Consumption	I _{dd}	V _{dd} = +10 V		2.2 A		A
12	Power Supply Voltage	V _{dd}		+9.7	+10.0	+10.3	V
13	Operating Temperature	T _o		-40		+85	°C

Absolute Maximum Ratings

Symbol	Parameters	Units	Absolute Maximum
V _{dd}	DC Power Supply Voltage	V	0 < V _{dd} < 12
I _{dd}	Drain Current	A	2.5
P _{diss}	Total Power Dissipation	W	25
P _{In,Max}	RF Input Power	dBm	13
T _{ch}	Channel Temperature	°C	175
T _{STG}	Storage Temperature	°C	-55 ~ 125
T _{O,MAX}	Maximum Operating Temperature	°C	-40 ~ 65
R _{th,c}	Thermal Resistance	°C/W	2.5
SWR _{2,MAX}	Maximum Load Mismatch	Ratio	∞:1

Operation of this device above any one of these parameters may cause permanent damage.

Functional Block Diagram



Ordering Information

Model Number	WBPA2429A
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Specifications and information are subject to change without notice.



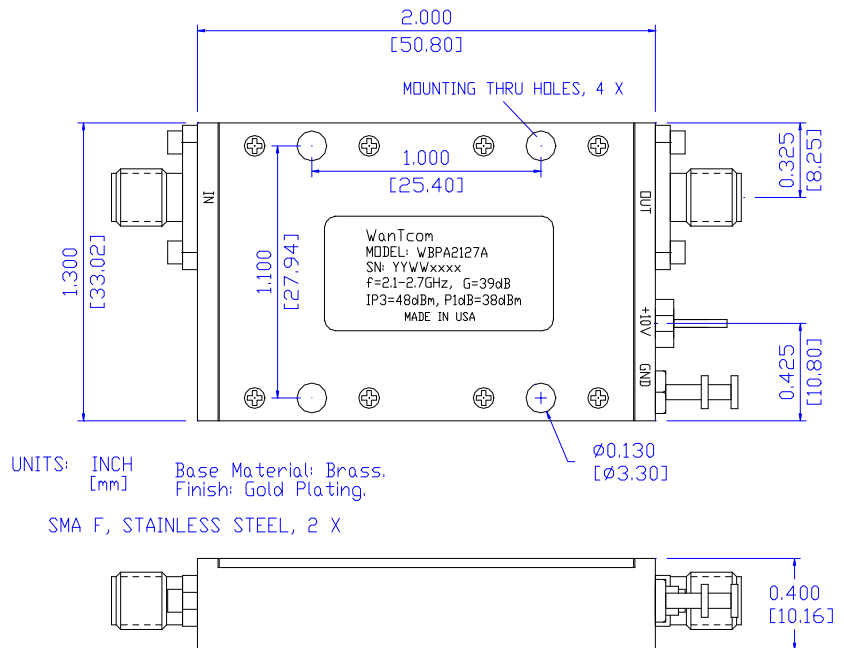
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Typical Data

Outline, WP-9L Housing



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