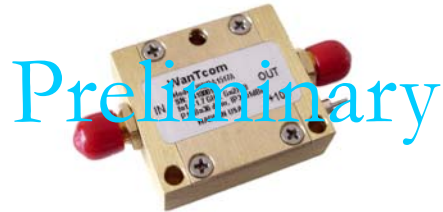




2.3 – 2.5 GHz 7.0 WATTS POWER AMPLIFIER WBPA2224A¹

WBPA2224A is a high power and high linearity connectorized amplifier with unconditional stable design. The amplifier offers typical 11.0 dB gain, 39 dBm P_{1dB} , and 50.0 dBm output IP_3 at the frequency range from 2.3 GHz to 2.5 GHz. WBPA2224A is most suitable for cellular base stations, wireless data communications, tower top amplifiers, last-mile wireless communication systems, and wireless measurement applications.



Additional heat sink required for the normal continuous operation!

Key Features:

Impedance:	50 Ohm
Class Operation:	AB
Output Protection:	Protection up to load VSWR of $\infty:1$
MTBF ² :	>150,000 hrs (17 Years)
Output IP_3 :	45.0 dBm
Gain:	11.0 dB
P_{1dB} :	39 dBm
Single Power Supply:	1.5 A @ +10.0V
Frequency Range:	2.2 ~ 2.5 GHz
Operating Temperature:	-40 ~ +65 °C
Input VSWR:	1.5:1
Output VSWR:	1.5:1
RF IN/OUT:	SMA Female
Built-In Functions:	DC blocks at input and output, DC-DC converter, sequencing biases, temperature compensation circuits, Output Protection, and auto DC biases.

Absolute Maximum Ratings³:

Symbol	Parameters	Units	Absolute Maximum
V_{dd}	DC Power Supply Voltage	V	12.0
I_{dd}	Drain Current	A	1.7
P_{diss}	Total Power Dissipation	W	18
$P_{in,Max}$	RF Input Power	dBm	28
T_{ch}	Channel Temperature	°C	150
T_{STG}	Storage Temperature	°C	-55 ~ 125
$T_{O,MAX}$	Maximum Operating Case Temperature	°C	-40 ~ 85
$R_{th,c}$	Thermal Resistance	°C/W	9

¹ Specifications are subject to change without notice.

² MTBF: Mean Time Between Failure, Per TR-NWT-000332, ISSUE 3, SEPTEMBER, 1990, T=40°C

³ Operation of this device above any one of these parameters may cause permanent damage.

Specifications:

a) Table 1 Summary of the electrical specifications WBPA2224A at room temperature

Index	Testing Item	Symbol	Test Constraints	Nom (RT)	Min	Max	Unit
1	Gain	S_{21}	2.3 – 2.5 GHz	11	10	14	dB
2	Gain Variation	ΔG	2.3 – 2.5 GHz	+/- 0.5		+/- 0.75	dB
3	Input VSWR	SWR_1	2.3 – 2.5 GHz	1.5:1		2.0:1	
4	Output VSWR	SWR_2	2.3 – 2.5 GHz	1.5:1		1.8:1	
5	Reverse Isolation	S_{12}	2.3 – 2.5 GHz	25	20		dB
6	Noise figure	NF	2.3 – 2.5 GHz	---			dB
7	Output Power 1dB compression Point	P_{1dB}	2.3 – 2.5 GHz	39	38		dBm
8	Output-Third-Order Interception point	IP_3	Two-Tone, $P_{out} = +20$ dBm each, 1 MHz separation	46.0	45.0		dBm
9	Current Consumption	I_{dd}	$V_{dd} = +10$ V	1.50			A
10	Power Supply Voltage	V_{dd}		+10	+9	+11	V
11	Thermal Resistance	$R_{th,c}$	Junction to case			9	°C/W
12	Operating Case Temperature	T_o			-40	+65	°C
13	Maximum Average RF Input Power	$P_{IN, MAX}$	2.3 – 2.5 GHz			28	dBm

b) WBPA2224A Mechanical Outline: WP-6

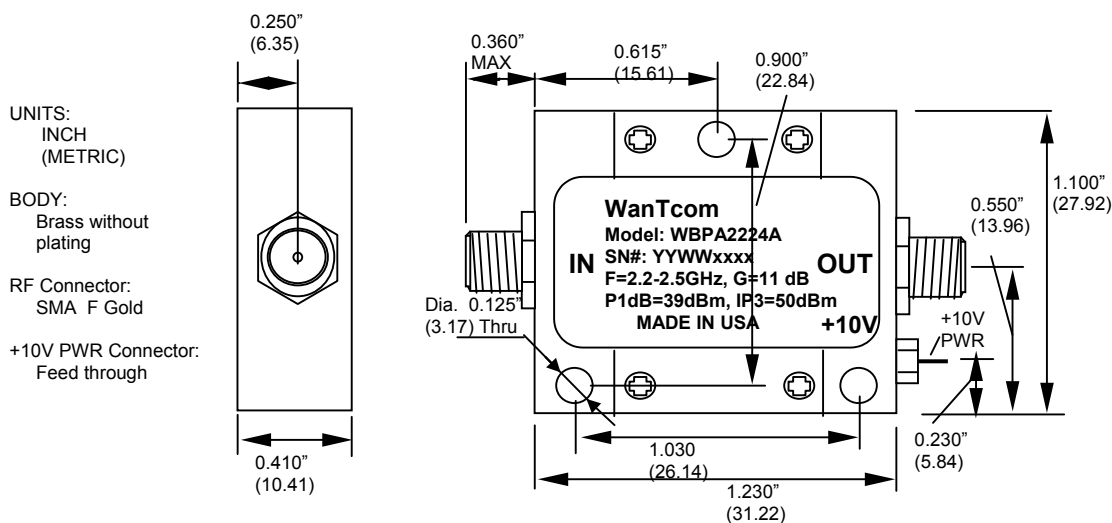


FIG. 1 WBPA2224A outline

Ordering Information

Model Number	WBPA2224A
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