



1.1 – 1.6 GHz 4 Watts POWER AMPLIFIER WBPA1116A¹

WBPA1116A is a dual band, high power, and high efficiency amplifier. The amplifier offers 28.0 dB gain and 36.0 dBm P_{1dB} at the frequency ranges from 1.1 GHz to 1.25 GHz and 1.55 GHz to 1.63 GHz bands.

WBPA1116A is most suitable for GPS and Galileo satellite communication systems and wireless measurement applications.

WBPA1116A has been designed to meet rugged standard of MIL-STD-202G and is RoHS complied product.



Additional heat sink required for the normal continuous operation!

Key Features:

Impedance:	50 Ohm
MTBF:	>150,000 hours
Gain:	28.0 dB
Input VSWR:	1.6:1 typical
Output VSWR:	1.6:1 typical
P_{1dB} :	36.0 dBm
Spurious:	< -70 dBc @ output of 30 dBm single tone.
Single Power Supply:	0.90, @ +10 V
Dual Band Operation:	1.10 – 1.25 GHz, 1.55 – 1.63 GHz
Operating Temperature:	-40 ~ +85 °C
Built-in Functions:	DC-DC converter, sequencing DC bias, optimum wide band matching networks, and temperature compensations, etc.

Absolute Maximum Ratings²:

Symbol	Parameters	Units	Absolute Maximum
V_{dd}	DC Power Supply Voltage	V	11.0
I_{dd}	Drain Current	A	1.0
P_{diss}	Total Power Dissipation	W	11
$P_{in,Max}$	RF Input Power	dBm	15
T_{ch}	Channel Temperature	°C	175
T_{STG}	Storage Temperature	°C	-65 ~ 150
$T_{O,MAX}$	Maximum Operating Temperature	°C	-20 ~ +85
$R_{th,c}$	Thermal Resistance	°C/W	9

¹ Specifications are subject to change without notice.

² Operation of this device above any one of these parameters may cause permanent damage.

Specifications:

a) Table 1 Summary of the electrical specifications of WBPAl116A at room temperature

Index	Testing Item	Symbol	Test Constraints	Nom	Min	Max	Unit
1	Gain	S ₂₁	1.10-1.25 GHz & 1.55 – 1.63 GHz	28	26	30	dB
2	Gain Variation	ΔG	1.10-1.25 GHz or 1.55 – 1.63 GHz	+/- 0.5		+/- 0.75	dB
3	Input Return SWR	SWR _i	1.10-1.25 GHz & 1.55 – 1.63 GHz	1.6:1		1.9:1	Ratio
4	Output Return SWR	S ₂₂	1.10-1.25 GHz & 1.55 – 1.63 GHz	1.6:1		1.9:1	Ratio
5	Reverse Isolation	S ₁₂	1.10-1.25 GHz & 1.55 – 1.63 GHz	48	43		dB
6	Output P _{1dB} compression	P _{1dB}	1.10-1.25 GHz & 1.55 – 1.63 GHz	36.0	35.0		dBm
7	Spurious	SP	P _{out} = 30 dBm, single tone		70		dBc
8	Current Consumption	I _{dd}	V _{dd} = +10 V	0.90			A
9	Power Supply Voltage	V _{dd}		+10	+9	+10.5	V
10	Operating Temperature	T _o			-40	+85	°C
11	Maximum Average RF Input Power	P _{IN, MAX}	1.10-1.25 GHz & 1.55 – 1.63 GHz			15	dBm

WBPA1116A MECHANICAL OUTLINE: WP-6

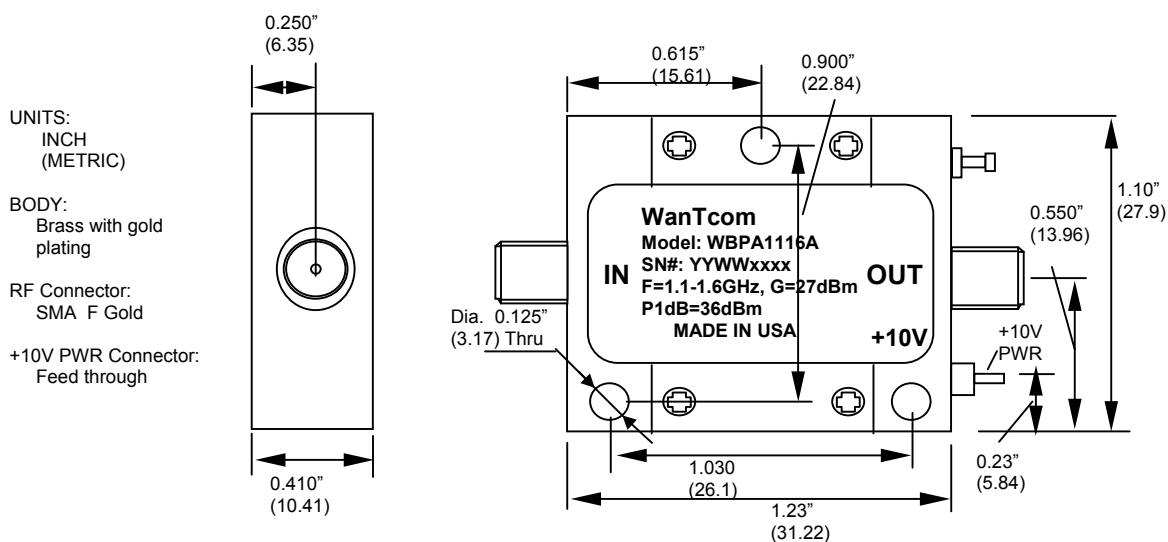


FIG. 1 WBPA1116A Outline

ORDERING INFORMATION

Function	Normal
Model Number:	WBPA1116A
