



WA0405A

380 – 530 MHz LOW NOISE WIDE BAND POWER AMPLIFIER

REV C
June 2016

Key Features



- 50 Ohm Impedance
- 380 ~ 530 MHz
- 0.80 dB Noise Figure
- 39.0 dBm Output IP₃
- 22.0 dB Gain
- 26.0 dBm P_{1dB}
- 1.15:1 VSWR
- Single Power Supply
- >64 years MTBF
- Unconditional Stable
- RoHS Compliant

Product Description



WA0405A is integrated with 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 +12.0V DC operation, the amplifier has optimal input and output matching in the specified frequency range at 50-Ohm impedance system. The amplifier has standard N Female connectorized WP-15 RoHS compliance clear plated housing.

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

Applications

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



Specifications

Summary of the electrical specifications WA0405A at room temperature

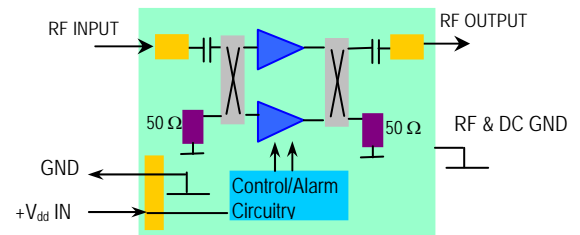
Index	Testing Item	Symbol	Test Constraints	Min	Nom	Max	Unit
1	Gain	S ₂₁	380 – 530 MHz		22		dB
2	Gain Variation	ΔG	380 – 530 MHz		+/- 0.5	+/-0.7	dB
3	Input VSWR	SWR ₁	380 – 530 MHz		1.15:1	1.35:1	Ratio
4	Output VSWR	SWR ₂	380 – 530 MHz		1.15:1	1.35:1	Ratio
5	Reverse Isolation	S ₁₂	380 – 530 MHz	25	30		dB
6	Noise Figure	NF	380 – 530 MHz		0.80	1.0	dB
7	Output Power 1dB Compression Point	P _{1dB}	380 – 530 MHz	24	26		dBm
8	Output-Third-Order Interception Point	IP ₃	Two-Tone, P _{out} +0 dBm each, 1 MHz separation	37	39		dBm
9	Current Consumption	I _{dd}	V _{dd} = +9 V ~ +16V		240		mA
10	Power Supply Voltage	V _{dd}		+9		+16	V
11	Thermal Resistance	R _{th,c}	Junction to case			25	°C/W
12	Operating Temperature	T _o		-40		+85	°C
13	Maximum CW RF Input Power	P _{IN, MAX}	0 – 6 GHz			15	dBm

Absolute Maximum Ratings

Parameters	Units	Ratings
DC Power Supply Voltage	V	16V
Drain Current	mA	300
Total Power Dissipation	W	3.6
CW RF Input Power	dBm	15
Channel Temperature	°C	150
Storage Temperature	°C	-55 ~ 125
Operating Temperature	°C	-40 ~ 85
Thermal Resistance	°C/W	25

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

Functional Block Diagram



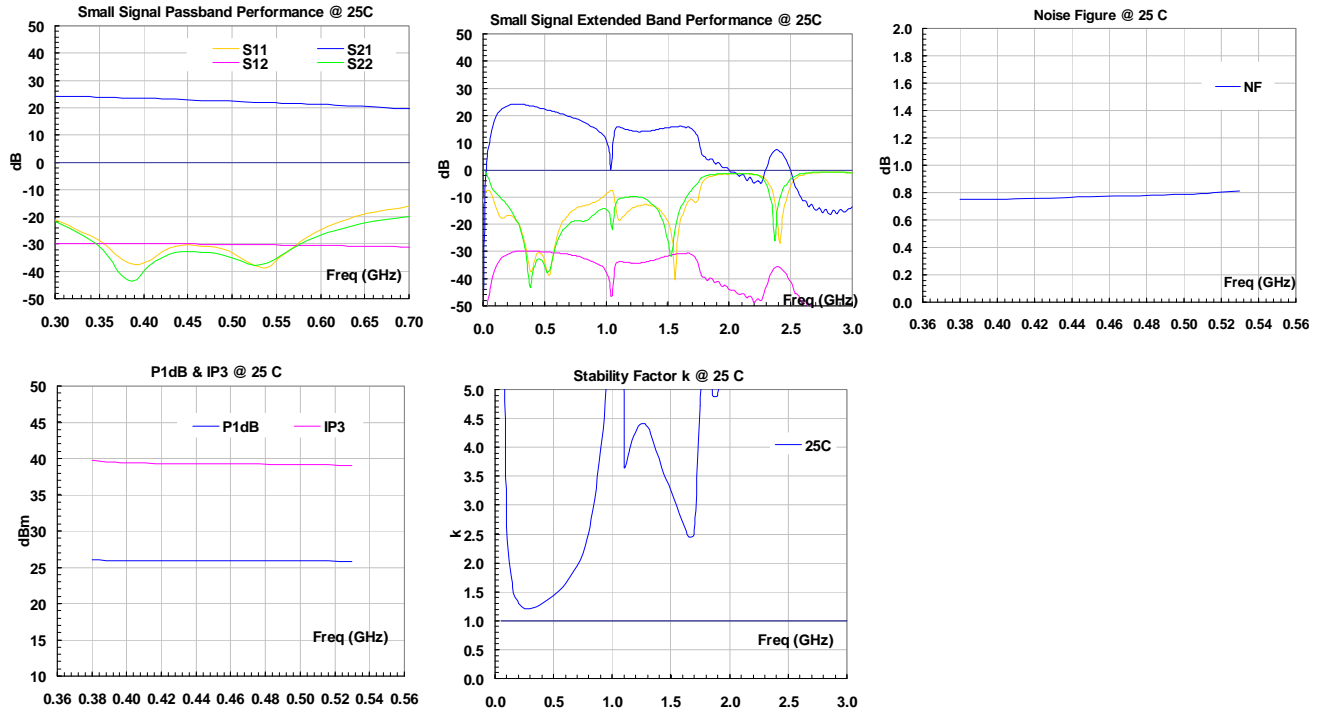
Ordering Information

Model Number	WA0405A
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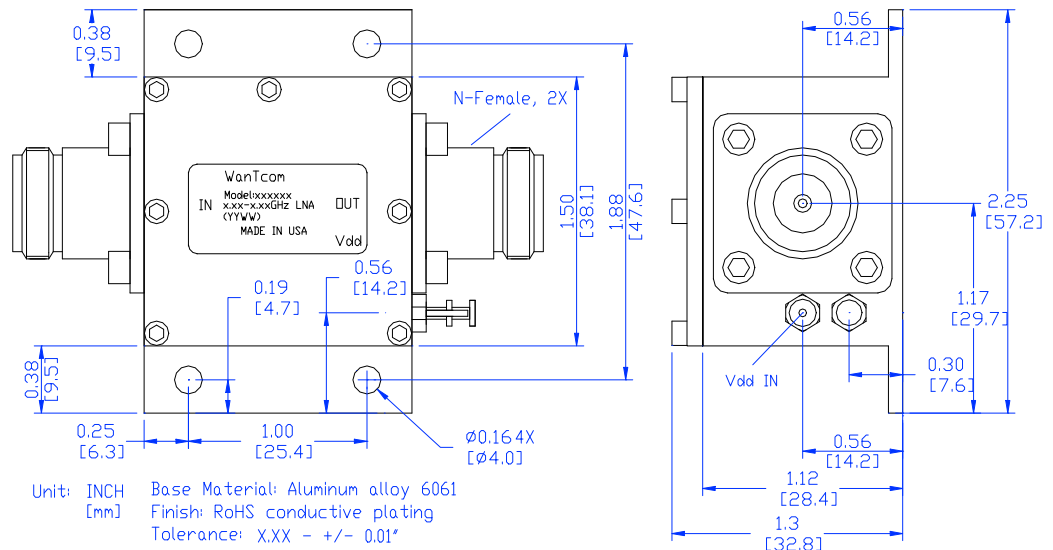
Specifications and information are subject to change without notice.



Typical Data



Outline, WP-15 Housing



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