



# WPM2426A

## 2.4- 2.6 GHz LOW NOISE 4.0 WATTS POWER AMPLIFIER

REV B  
March 2017

### Key Features



- 2.4 ~ 2.6 GHz
- 1.5 dB Noise Figure
- 46.0 dBm Output IP<sub>3</sub>
- 22.0 dB Gain
- 36.0 dBm P<sub>1dB</sub>
- 1.5:1 VSWR
- Single Power Supply
- >34 Years MTBF
- Unconditional Stable
- RoHS Compliant

### Product Description

WPM2426A is integrated by 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 +10.0V DC operation, the amplifier has optimal input and output matching in the specified frequency range at 50-Ohm impedance system. The amplifier has standard WPM-5 Gold plated pallet.

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

CAUTION:



ELECTROSTATIC DISCHARGE SENSITIVE

### Applications

- Mobile Infrastructures
- 3G
- ISM
- Defense
- Security System
- Measurement
- Fixed Wireless



### Specifications

Summary of the electrical specifications WPM2426A at room temperature

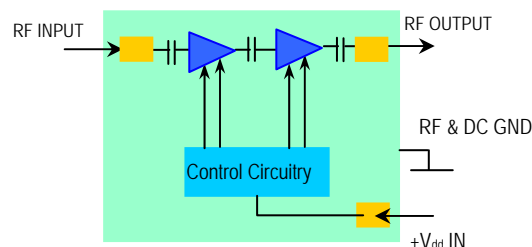
Index	Testing Item	Symbol	Test Constraints	Min	Nom	Max	Unit
1	Gain	S <sub>21</sub>	2.4 – 2.6 GHz	20	22	24	dB
2	Gain Variation	ΔG	2.4 – 2.6 GHz		+/- 0.25	+/-0.5	dB
3	Input VSWR	SWR <sub>1</sub>	2.4 – 2.6 GHz		1.25:1	1.5:1	Ratio
4	Output VSWR	SWR <sub>2</sub>	2.4 – 2.6 GHz		1.25:1	1.5:1	Ratio
5	Reverse Isolation	S <sub>12</sub>	2.4 – 2.6 GHz	40	43		dB
6	Noise Figure	NF	2.4 – 2.6 GHz		1.5	2.0	dB
7	Output 1dB Gain Compression Point	P <sub>1dB</sub>	2.4 – 2.6 GHz	34	36		dBm
8	Output-Third-Order Interception Point	IP <sub>3</sub>	Two-Tone, P <sub>out</sub> +20 dBm each, 1 MHz separation	43	46		dBm
9	Current Consumption	I <sub>dd</sub>	V <sub>dd</sub> = +10 V		1.05	1.1	A
10	Power Supply Voltage	V <sub>dd</sub>		+9	+10	+11	V
11	Thermal Resistance	R <sub>th,c</sub>	Junction to case			7	°C/W
12	Operating Temperature	T <sub>o</sub>		-40		+85	°C
13	Maximum Input CW RF Power	P <sub>IN, MAX</sub>	DC – 6 GHz			20	dBm

### Absolute Maximum Ratings

Parameters	Units	Ratings
DC Power Supply Voltage	V	-0.5, 12
Drain Current	A	1.15
Total Power Dissipation	W	12
RF Input Power	dBm	20
Channel Temperature	°C	150
Storage Temperature	°C	-55 ~ 125
Operating Temperature	°C	-40 ~ 85
Thermal Resistance	°C/W	7

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

### Functional Block Diagram



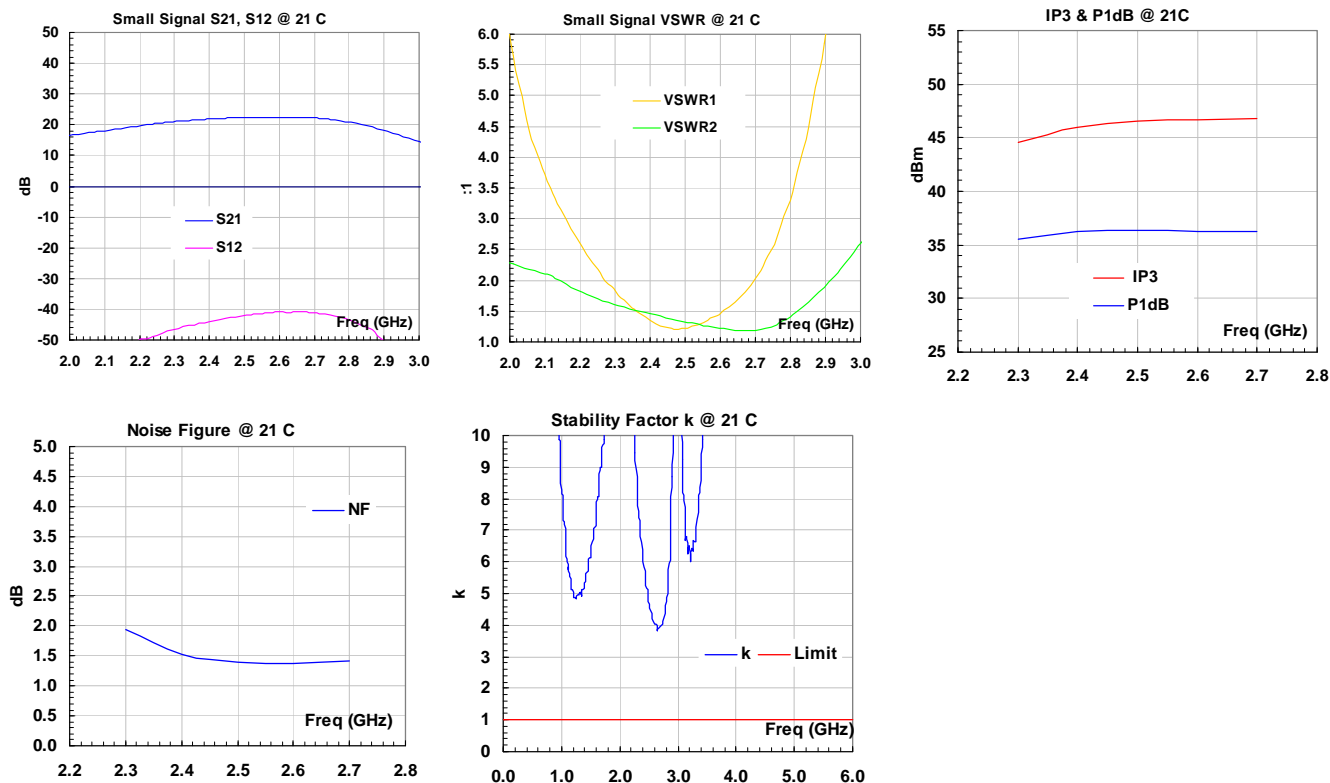
### Ordering Information

Model Number	WPM2426A
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Specifications and information are subject to change without notice.

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## Typical Data



## Outline, WPM-5

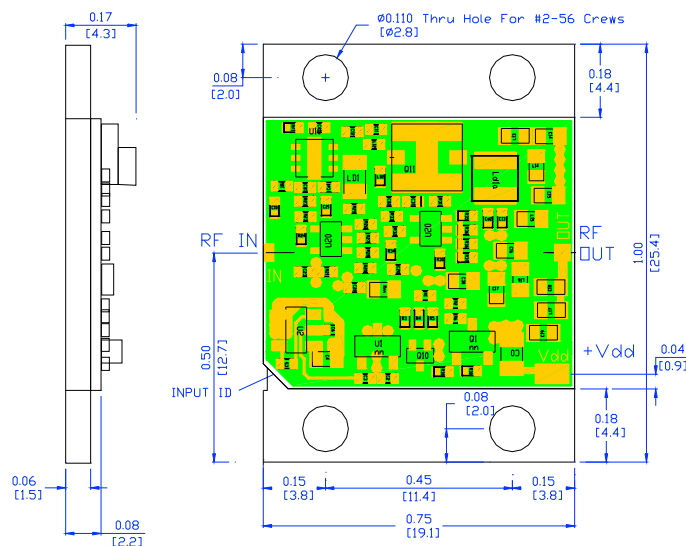
UNITS: INCH  
[mm]

BODY: Brass

Finish: Gold Plating

RF I/O: Microstrip

V<sub>dd</sub> PWR: Microstrip



### NOTES

1. BASE MATERIAL: BRASS
2. FINISH: A. GOLD PLATING.

UNIT: INCH  
[mm]

### Tolerance:

X.XX - +/- 0.015"

X.XXX - +/- 0.005"

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### Application Notes:

#### A. Mounting the Amplifier

Use four pieces of #2-56 with longer than 9/16" screws for mounting the amplifier on a metal-based chase. Flat and spring washers are needed to prevent the screw loosening during the shock and vibration. Always use the appropriate torque setting of the power screwdriver to mount them. Thermal film such as T-gon is required between the bottom of the PA and the top of the heat sink for maximum heat dissipation.

Always have stress release jumper structure in the connection of the RF and DC I/Os to the system board.

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