



WPM04-2045A

400- 465 MHz 4 Watts POWER AMPLIFIER

REV B

December, 2020

Key Features



- 400 ~ 465 MHz
- 5.0 dB Noise Figure
- 48.0 dBm Output IP₃
- 20.0 dB Gain
- +/-0.5 dB Gain Flatness
- 36.0 dBm P_{1dB}
- 1.5:1 VSWR
- Single Power Supply
- >34 Years MTBF
- Unconditional Stable
- RoHS compliant

Product Description

WPM04-2045A is integrated with WanTcom proprietary high power 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 miniature WPM-3 gold plated pallet.

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

CAUTION:



ELECTROSTATIC DISCHARGE SENSITIVE

Applications

- FM Communications
- Land Mobiles
- Broadcast
- Security System
- Measurement
- Fixed Wireless

Specifications

Summary of the electrical specifications WPM04-2045A at room temperature

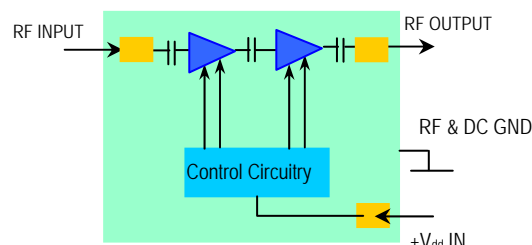
Index	Testing Item	Symbol	Test Constraints	Min	Nom	Max	Unit
1	Gain	S ₂₁	400 – 465 MHz		20		dB
2	Gain Variation	ΔG	400 – 465 MHz		+/- 0.5	+/-0.75	dB
3	Input VSWR	SWR ₁	400 – 465 MHz		1.5:1	2:1	Ratio
4	Output VSWR	SWR ₂	400 – 465 MHz			1.5:1	dB
5	Reverse Isolation	S ₁₂	400 – 465 MHz		30		dB
6	Noise Figure	NF	400 – 465 MHz		5.0		dB
7	Output Power 1dB Compression Point	P _{1dB}	400 – 465 MHz	34	36		dBm
8	Output-Third-Order Interception Point	IP ₃	Two-Tone, P _{out} +10 dBm each, 1 MHz separation	43	48		dBm
9	Current Consumption	I _{dd}	V _{dd} = +10 V		850		mA
10	Power Supply Voltage	V _{dd}		+9.7	+10	+10.5	V
11	Thermal Resistance	R _{th,c}	Junction to case, last stage power transistor			9	°C/W
12	Operating Temperature	T _o		-40		+85	°C
13	Maximum Average RF Input Power	P _{IN, MAX}	0 – 6 GHz			27	dBm
14	Spurious	P _{o, sp}	20 – 6000 MHz, P _o = 30 dBm	-70			dBc

Absolute Maximum Ratings

Parameters	Units	Ratings
DC Power Supply Voltage	V	12
Drain Current	A	1.1
Total Power Dissipation	W	9
CW RF Input Power	dBm	27
Junction Temperature	°C	150
Storage Temperature	°C	-55 ~ 125
Operating Temperature	°C	-40 ~ 85
Thermal Resistance	°C/W	9

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

Functional Block Diagram



Ordering Information

Preliminary

Specifications and information are subject to change without notice.

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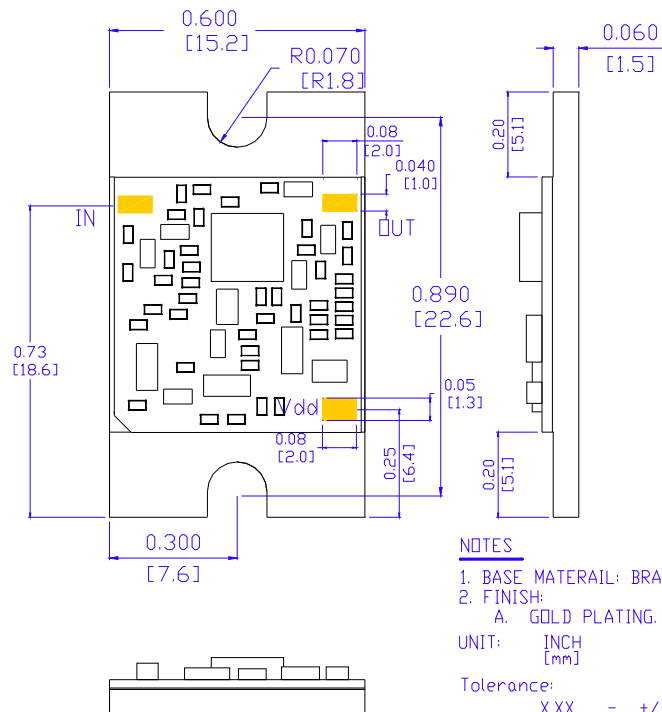
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Model Number	WPM04-2045A
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Typical Data

Outline, WPM-3

UNITS: INCH
[mm]
BODY: Brass
Finish: Gold Plating
RF Connector: SMA F Gold
V_{dd} PWR: Feed through



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