



WHM30-2525LE

2.5 – 3.5 GHz LOW NOISE WIDE BAND LIMITER AMPLIFIER

REV A
November 2008

Key Features



- 2.5 ~ 3.5 GHz
- 0.80 dB Noise Figure
- 26.0 dBm Output IP₃
- 27.0 dB Gain
- 30 dBm Maximum P_{in}
- 14.0 dBm P_{1dB}
- 1.5:1 VSWR Fully Matched
- Single Power Supply
- Built-in Limiter
- RoHS Compliant
- MLS-1 Moisture Sensitivity Level

Product Description

WHM30-2525LE integrates WanTcom proprietary low noise amplifier technologies, high frequency micro electronic assembly techniques, and high reliability designs to realize optimum low noise figure, wideband, and high performances together. With single +5.0V DC operation, the amplifier has optimal input and output matching in the specified frequency range at 50-Ohm impedance system. The amplifier has standard 0.40" x 0.25" x 0.085" surface mount package.

The amplifier is designed to meet the rugged standard of MIL-STD-883.

Applications

- Mobile Infrastructures
- WiMAX
- Defense
- Security System
- Measurement
- Fixed Wireless

Specifications

Preliminary

Summary of the key electrical specifications at room temperature

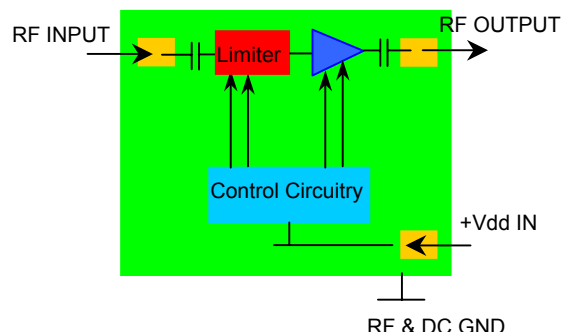
Index	Testing Item	Symbol	Test Constraints	Min	Nom	Max	Unit
1	Gain	S ₂₁	2.5 – 3.5 GHz		27		dB
2	Gain Variation	ΔG	2.5 – 3.5 GHz		+/- 1.0		dB
3	Input Return Loss	S ₁₁	2.5 – 3.5 GHz	12	15		dB
4	Output Return Loss	S ₂₂	2.5 – 3.5 GHz	12	15		dB
5	Reverse Isolation	S ₁₂	2.5 – 3.5 GHz	30	35		dB
6	Noise Figure	NF	2.5 – 3.5 GHz		0.8	0.85	dB
7	Output Power 1dB Compression Point	P _{1dB}	2.5 – 3.5 GHz	12	14		dBm
8	Output-Third-Order Interception point	IP ₃	Two-Tone, P _{out} = 0 dBm each, 1 MHz separation	24	26		dBm
9	Current Consumption	I _{dd}	V _{dd} = +5.0 V		50		mA
10	Power Supply Operating Voltage	V _{dd}		+4.7	+5	+5.3	V
11	Thermal Resistance	R _{th,c}	Junction to case			220	°C/W
12	Operating Temperature	T _o		-40		+85	°C
13	Maximum Average RF Input Power	P _{IN, MAX}	DC – 6.0 GHz			30	dBm

Absolute Maximum Ratings

Parameters	Units	Ratings
DC Power Supply Voltage	V	6.0
Drain Current	mA	70
Total Power Dissipation	mW	400
RF Input Power	dBm	30
Channel Temperature	°C	150
Storage Temperature	°C	-65 ~ 150
Operating Temperature	°C	-40 ~ +85
Thermal Resistance	°C/W	220

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

Functional Block Diagram



Ordering Information

Model Number	WHM30-2525LE
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ESD resistance tube of 25 pieces is used for the packing. Contact factory for tape and reel packing option for higher volume order.

Specifications and information are subject to change without notice.



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Outline, WHM-7

