



RFMA2124-1W

UPDATED 10/25/2006

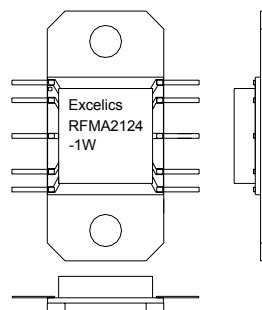
21.2 – 23.6 GHz Power Amplifier MMIC

FEATURES

- 21.2 – 23.6 GHz Operating Frequency Range
- 28.5dBm Output Power at 1dB Compression
- 22 dB Typical Power Gain @1dB gain Compression
- -41dBc Typical OIM3 @ Each Tone Pout 18dBm

APPLICATIONS

- Point-to-point and point-to-multipoint radio
- Military Radar Systems



Different packages are available



Caution! ESD sensitive device.

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$, 50 ohm, Vdd=7V, Vgg=-5V)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	21.2		23.6	GHz
P1dB	Output Power at 1dB Gain Compression	27	28.5		dBm
G1dB	Gain @1dB gain compression	18	22		dB
OIMD3	Output 3 rd Order Intermodulation Distortion @ $\Delta f=10\text{MHz}$, Each Tone Pout 17dBm		-41	-38	dBc
Input RL	Input Return Loss		-10		dB
Output RL	Output Return Loss		-15	-10	dB
I_{dd}	Drain Current		1100	1400	mA
V_{dd}	Drain Voltage		7	8	V
V_{gg}	Gate Voltage		-5		V
R_{th}	Thermal Resistance (Au-Sn Eutectic Attach)		7	7.5	$^\circ\text{C}/\text{W}$
T_b	Operating Base Plate Temperature	- 30		+ 80	$^\circ\text{C}$

MAXIMUM RATINGS AT 25°C

SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINUOUS
V _{dd}	Drain Supply Voltage	12V	8V
V _{gg}	Gate Supply Voltage	-8V	-3 V
I _{dd}	Drain Current	I _{dss}	1.9A
I _{gg}	Gate Current	132mA	22 mA
P _{IN}	Input Power	20dBm	@ 3dB compression
T _{CH}	Channel Temperature	175°C	150°C
T _{STG}	Storage Temperature	-65/175°C	-65/150°C

1. Operating the device beyond any of the above rating may result in permanent damage.

2. Bias conditions must also satisfy the following equation $V_{dd} \cdot I_{dd} < (T_{CH} - T_{HS})/R_{TH}$; where T_{HS} = base plate temperature

Specifications are subject to change without notice.

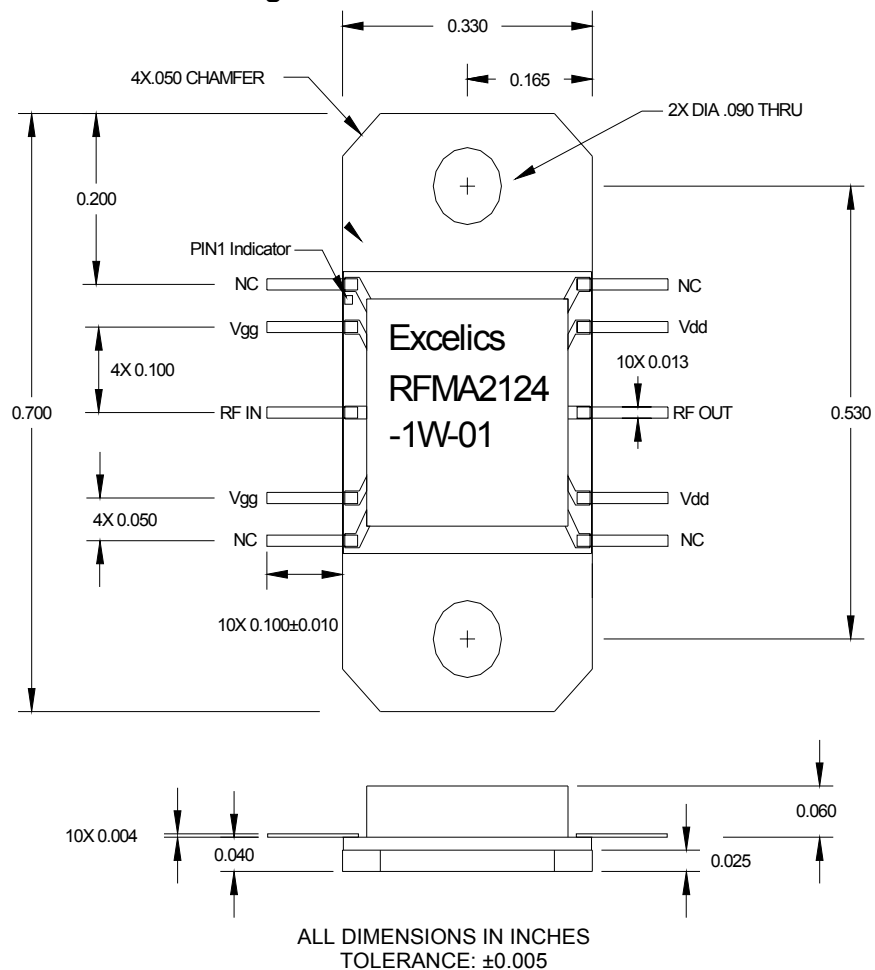
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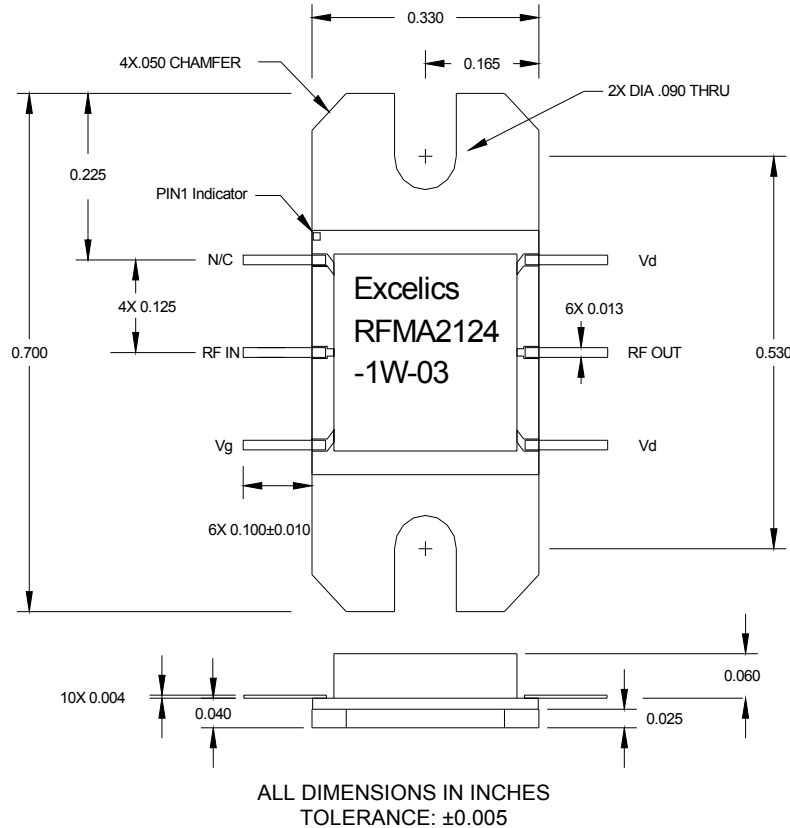
Revised November 2006

01 Package Dimension and Pin Assignment



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03 Package Dimension and Pin Assignment



Ordering Information

Part Number	
RFMA2124-1W-01	Refer 01 Package Outline
RFMA2124-1W-03	Refer 03 Package Outline

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- A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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