



RFMA2124-0.5W

21.2 – 23.6 GHz Power Amplifier MMIC

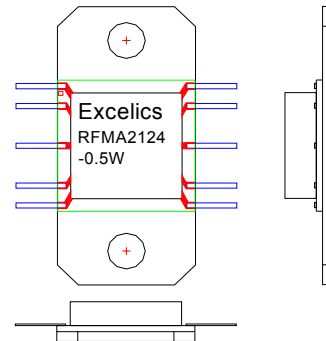
UPDATED 10/25/2006

FEATURES

- 21.2 – 23.6 GHz Operating Frequency Range
- 26.5 dBm Output Power at 1dB Compression
- 26.0 dB Typical Small Signal Gain
- -41dBc Typical OIM3 @ each tone Pout 15.5 dBm

APPLICATIONS

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



Caution! ESD sensitive device.

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

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	21.2		23.6	GHz
P1dB	Output Power at 1dB Gain Compression	25	26.5		dBm
G _{SS}	Small Signal Gain	20	23		dB
OIMD3	Output 3 rd Order Intermodulation Distortion @ $\Delta f=10\text{MHz}$, Each Tone Pout 15.5 dBm		-41	-38	dBc
Input RL	Input Return Loss		-10		dB
Output RL	Output Return Loss		-8		dB
I _{dd}	Drain Current		760		mA
V _{dd}	Drain Supply Voltage		7	8	V
R _{th}	Thermal Resistance (Au-Sn Eutectic Attach)		9		$^\circ\text{C}/\text{W}$
T _b	Operating Base Plate Temperature	-30		+80	$^\circ\text{C}$

MAXIMUM RATINGS @25°C

SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINUOUS ^{1,2}
V _{DD}	Drain Supply Voltage	12V	8V
V _{GG}	Gate Supply Voltage	-8V	-3V
I _{DD}	Drain Current	I _{dss}	1.1A
I _{GG}	Gate Current	60mA	10 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
P _T	Total Power Dissipation	8.8W	7.4W

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

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

Specifications are subject to change without notice.

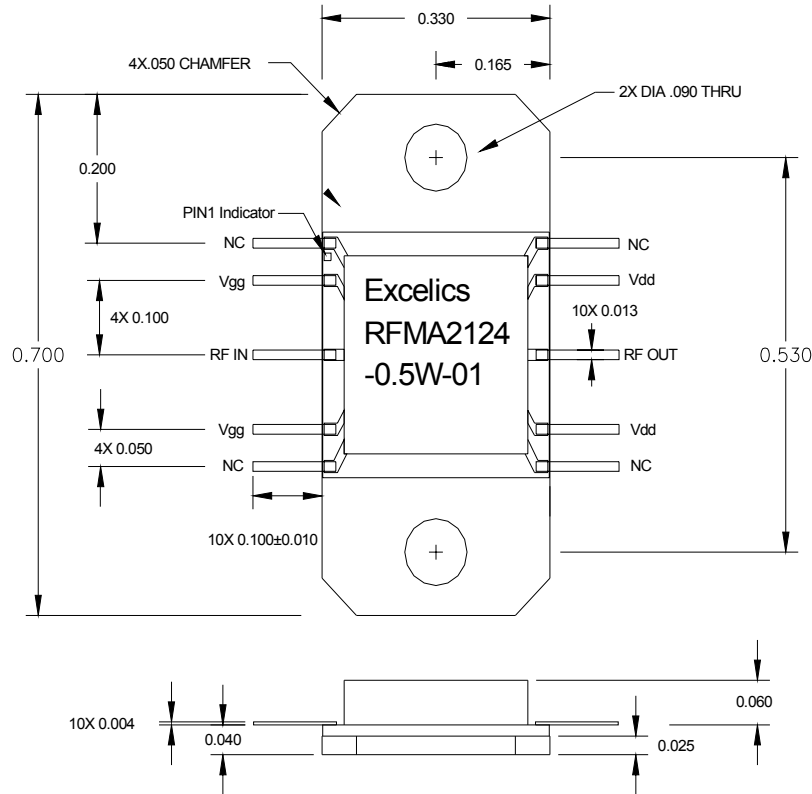
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01 Package Outline



All dimensions in inches

ORDERING INFORMATION

Part Number	
RFMA2124-0.5W-01	Refer 01 Package Outline

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2. 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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