



RFMA1415-2W

UPDATED 06/21/2007

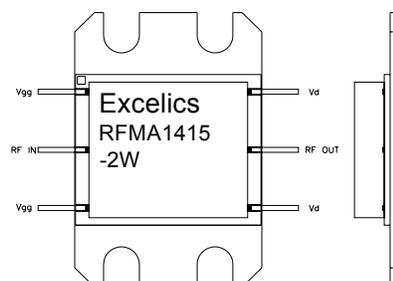
14.4 – 15.4 GHz Power Amplifier MMIC

FEATURES

- 14.40– 15.40GHz Operating Frequency Range
- 32 dBm Output Power at 1dB Compression
- 28 dB Typical Power Gain @ 1dB Gain Compression
- -41dBc Typical OIM3 @ each tone Pout 21.5dBm

APPLICATIONS

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



Caution! ESD sensitive device.

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

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	14.4		15.4	GHz
P1dB	Output Power at 1dB Gain Compression	31	32		dBm
G1dB	Gain @ 1dB gain compression	25	28		dB
OIMD3	Output 3 rd Order Intermodulation Distortion @ $\Delta f=10\text{MHz}$, Each Tone Pout 21 dBm		-41	-38	dBc
Input RL	Input Return Loss		-10	-8	dB
Output RL	Output Return Loss		-15	-8	dB
I _{dd}	Drain Current		1900	2150	mA
V _{dd}	Drain Voltage		7	8	V
V _{gg}	Gate Voltage		-5		V
R _{th}	Thermal Resistance (Au-Sn Eutectic Attach)		4.0	4.5	$^\circ\text{C/W}$
T _b	Operating Base Plate Temperature	-30		+80	$^\circ\text{C}$

MAXIMUM RATINGS @25 $^\circ\text{C}$

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}	3.6A
I _{GG}	Gate Current	240mA	40mA
P _{IN}	Input Power	20dBm	@ 3dB compression
T _{CH}	Channel Temperature	175 $^\circ\text{C}$	150 $^\circ\text{C}$
T _{STG}	Storage Temperature	-65/175 $^\circ\text{C}$	-65/150 $^\circ\text{C}$
P _T	Total Power Dissipation	30.0W	25.2W

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.

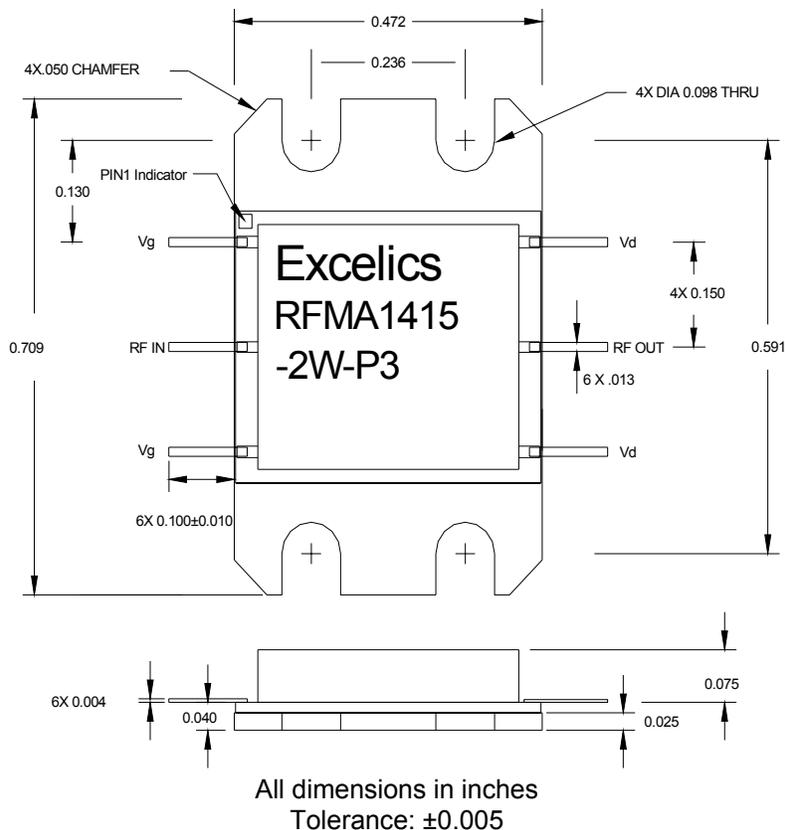
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Revised June 2007

Package Outline



ORDERING INFORMATION

Part Number	
RFMA1415-2W-P3	Refer P3 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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