



RFMA1415A-2W

UPDATED 02/16/2005

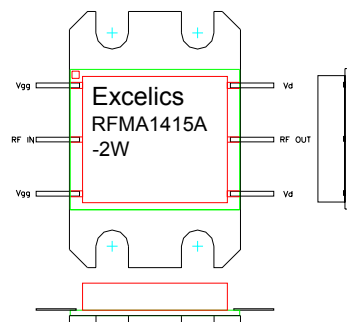
14.20 – 14.60 GHz Power Amplifier MMIC

FEATURES

- 14.20– 14.60GHz Operating Frequency Range
- 32.5dBm Output Power at 1dB Compression
- 30.0 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 °C, 50 ohm, V_{dd}=7V, V_{gg}=-5V)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	14.2		14.6	GHz
P1dB	Output Power at 1dB Gain Compression	31.5	32.5		dBm
G1dB	Gain @ 1dB gain compression	27.0	30.0		dB
OIMD3	Output 3 rd Order Intermodulation Distortion @Δf=10MHz, Each Tone Pout 21.5dBm		-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	°C/W
T_b	Operating Base Plate Temperature	-30		+80	°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}	3.6A
I_{GG}	Gate Current	240mA	40mA
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	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.

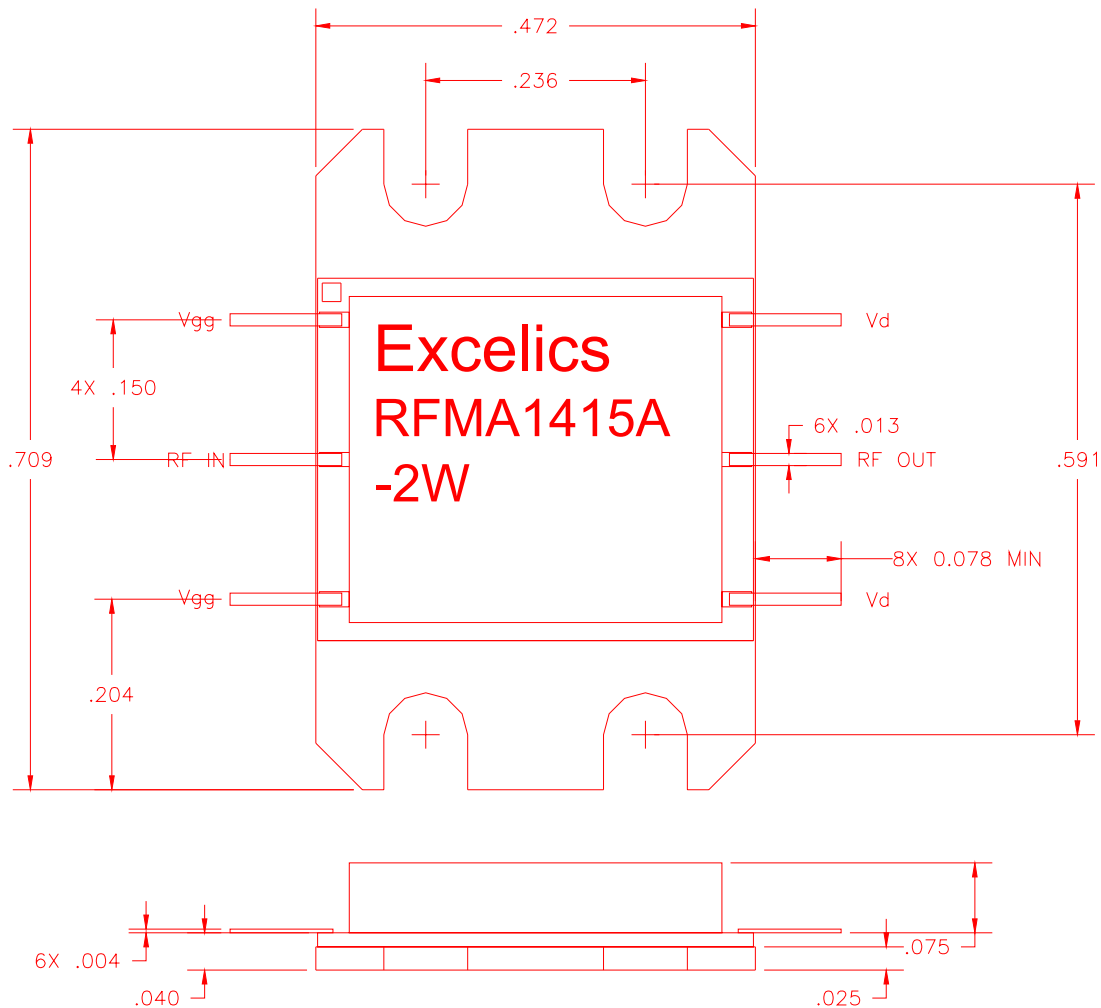
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P3 Package Outline



All dimensions in inches

Ordering Information

Part Number	
RFMA1415A-2W-P3	Refer P3 Package Outline