



# RFMA5065-1W

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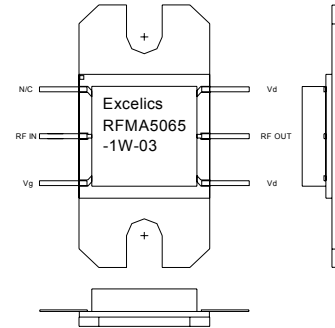
## 5.0 – 6.5 GHz Power Amplifier MMIC

### FEATURES

- 5.0– 6.5GHz Operating Frequency Range
- 30dBm Output Power at 1dB Compression
- 37.0 dB Typical Power Gain @1dB Gain Compression
- -38dBc Maximum OIM3 @ Each Tone Pout 18.5dBm

### APPLICATIONS

- Point-to-Point And Point-to-Multipoint Radio
- Military Radar Systems



Caution! ESD sensitive device.

### ELECTRICAL CHARACTERISTICS (Tb = 25 °C, 50 ohm, Vdd=7V, Vgg=-5V)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	5.0		6.5	GHz
P1dB	Output Power at 1dB Gain Compression	28.5	30		dBm
G1dB	Gain @1dB gain compression	31.0	37.0		dB
OIMD3	Output 3 <sup>rd</sup> Order Intermodulation Distortion @Δf=10MHz, Each Tone Pout 18.5dBm		-41	-38	dBc
Input RL	Input Return Loss		-12	-6	dB
Output RL	Output Return Loss		-6		dB
Idd	Drain Current @small signal output power level		950	1100	mA
Vdd	Drain Supply Voltage		7		V
Vgg	Gate Supply Voltage		-5		V
Rth	Thermal Resistance		7		°C/W
Tb	Operating Base Plate Temperature	-30		+80	°C

### MAXIMUM RATINGS @25°C<sup>1,2</sup>

SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINUOUS <sup>1,2</sup>
V <sub>DD</sub>	Drain Supply Voltage	10V	8V
V <sub>GG</sub>	Gate Supply Voltage	-8V	-3 V
I <sub>DQ</sub>	Quiescent Drain Current	I <sub>dss</sub>	1.1A
I <sub>GG</sub>	Gate Current	60mA	30 mA
P <sub>IN</sub>	Input Power	20dBm	@ 3dB compression
T <sub>CH</sub>	Channel Temperature	175°C	150°C
T <sub>STG</sub>	Storage Temperature	-65/175°C	-65/150°C
P <sub>T</sub>	Total Power Dissipation	15W	12.6W

Notes:

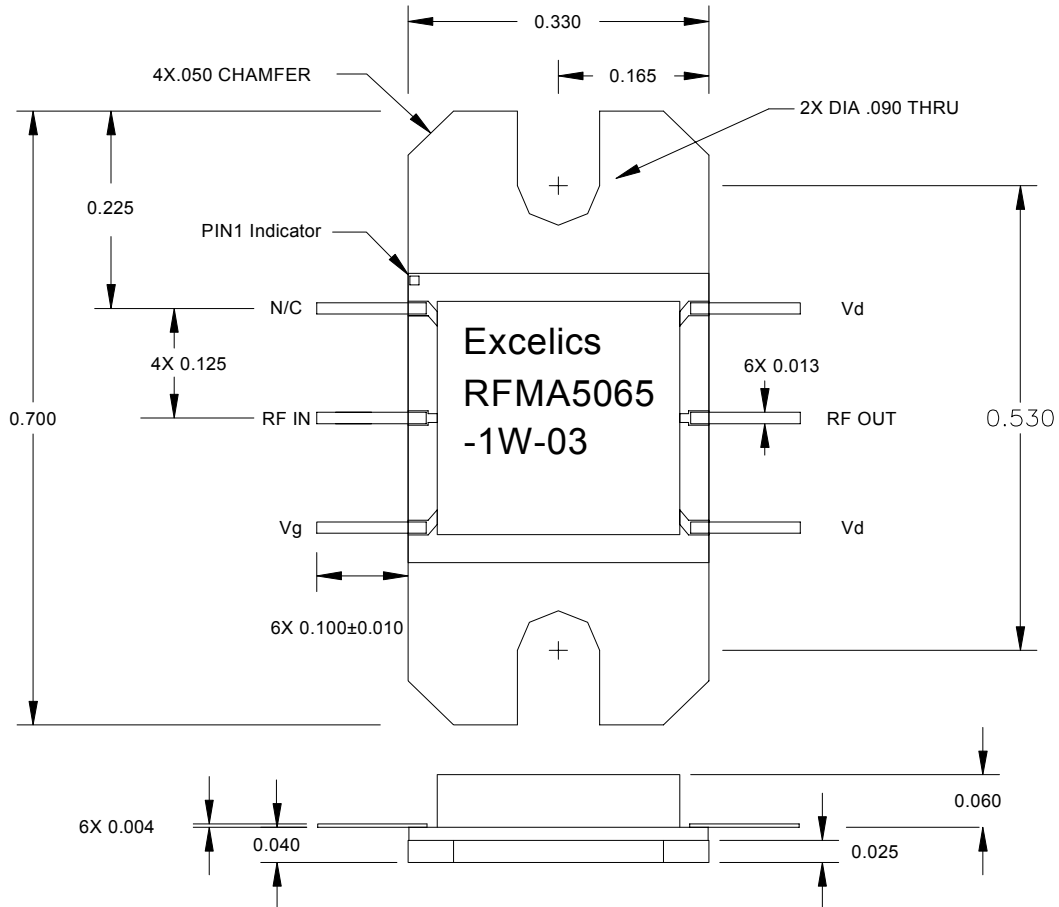
1. Operating the device beyond any of the above rating may reduce MTTF and cause permanent damage.
2. Bias conditions must also satisfy the following equation  $V_{dd} * I_{dd} < (T_{CH} - T_b) / R_{TH}$

Specifications are subject to change without notice.

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### 03 Package Outline



DIMENSION: INCH  
TOLERANCE: ±0.005

### ORDERING INFORMATION

Part Number	
RFMA5065-1W-03	Refer 03 Package Outline

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