RFMA5880-0.1W-02

5.8 – 8.0 GHz Power Amplifier MMIC

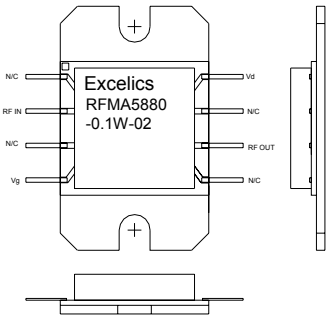
ISSUED: 12/23/08

FEATURES

- **5.8 – 8.0GHz Operating Frequency Range**
- **21.0dBm Output Power @1dB Compression**
- **27.0dB Typical Power Gain @1dB Compression**
- **-41dBc OIMD3 @Pout 11dBm/tone**

APPLICATIONS

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



ELECTRICAL CHARACTERISTICS (T_B=25 °C)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	5.8		8.0	GHz
P_{1dB}	Output Power @1dB Gain Compression	20.0	21.0		dBm
G_{1dB}	Gain @1dB Gain Compression	24.0	27		dB
OIMD3	Output 3rd Order Intermodulation Distortion @Δf=10MHz, Pout = 17dBm/tone		-41	-38	dBc
Input RL	Input Return Loss		-12	-10	dB
Output RL	Output Return Loss		-10		dB
I_{D1}	Drain Current[1]		300	400	mA
V_D	Drain Voltage	5		7	V
V_G	Gate Voltage		-5		V
Rth	Thermal Resistance[2]		22		°C/W
Tb	Operating Base Plate Temperature	-30		+80	°C

1. Recommended to bias each amplifier stage separately using a gate voltage range, starting from -2.5 to -0.3V to achieve typical current levels.
2. Rth is mounting dependent. Measured result when used with Excelics recommended evaluation board.

MAXIMUM RATINGS AT 25°C[3,4]

SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINOUS
V_D	Drain to Source Voltage	12V	8 V
V_G	Gate to Source Voltage	-5V	-2.5 V
I_D	Drain Current	Idss	400mA
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	4.0W	3W

3. Operation beyond *absolute* or *continuous* ratings may result in permanent damage or reduction of MTTF respectively.
4. Bias conditions must also satisfy the following equation V_{DS}*I_{DS} < (T_{CH} –T_B)/R_{TH}; where T_B = Temperature of Base Plate

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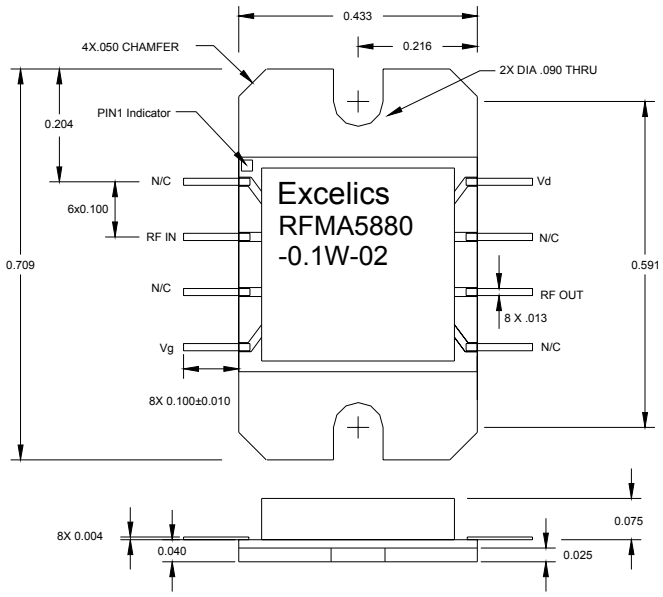
02 Package Outline



All dimensions in inches

ORDERING INFORMATION

Part Number	
RFMA5880-0.1W-02	Refer 02 Package Outline

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