

UPDATED: 02/26/2009

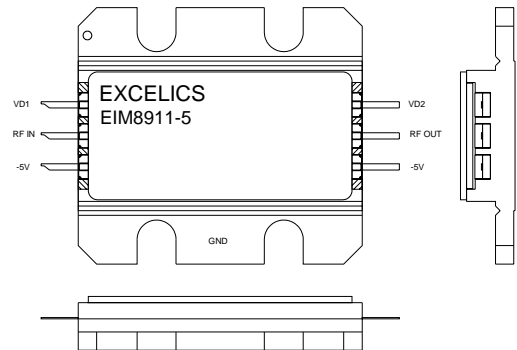
## 8.95-10.6GHz Multi-Stage Power Amplifier

### FEATURES

- 8.95– 10.60GHz Operating Frequency Range
- 37dBm Output Power at 2dB Compression
- 26.0 dB Typical Power Gain @2dB gain compression
- Non-Hermetic Metal Flange Package

### APPLICATIONS

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


**Caution! ESD sensitive device.**

### ELECTRICAL CHARACTERISTICS (T<sub>b</sub> = 25 °C, 50 ohm, VD1=7V, VD2=10V, V<sub>gg</sub>=-5V)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>F</b>	Operating Frequency Range	8.95		10.6	GHz
<b>P2dB</b>	Output Power at 2dB Gain Compression	36	37		dBm
<b>G2dB</b>	Gain @2dB gain compression	24	26		dB
<b>Input RL</b>	Input Return Loss		-12	-8	dB
<b>Output RL</b>	Output Return Loss		-15	-10	dB
<b>VD1</b>	Drain Supply Voltage 1		7		V
<b>VD2</b>	Drain Supply Voltage 2		10		V
<b>I<sub>DQ1</sub></b>	Quiescent Drain Current 1		800		mA
<b>I<sub>DQ2</sub></b>	Quiescent Drain Current 2		2200	2600	mA
<b>V<sub>gg</sub></b>	Gate Supply Voltage		-5		V
<b>R<sub>th</sub></b>	Thermal Resistance		3.4		°C/W
<b>ΔT<sub>ch</sub></b>	Channel Temperature Rise			80	°C

Note: Turn on/off sequence is required:

 ---to turn on: apply -5V on both V<sub>gg</sub> first, then +7V and +10V.

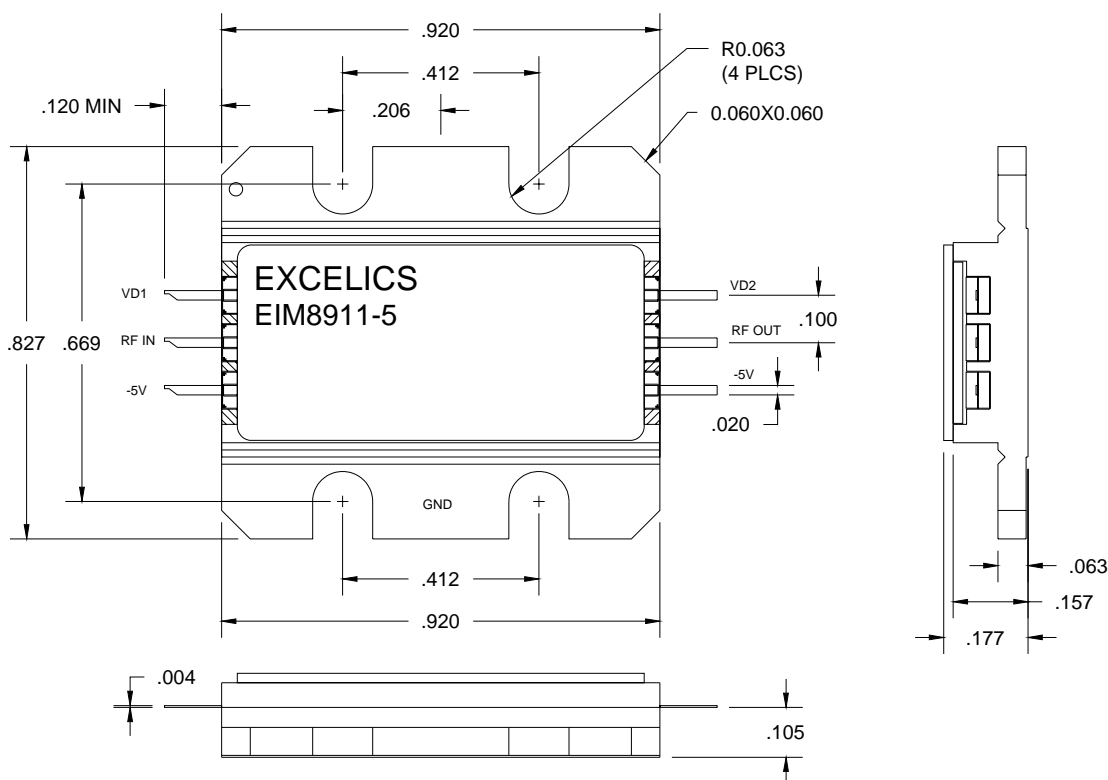
---to turn off: turn +7V and +10V off first, then turn -5V off

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

SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINUOUS <sup>1,2</sup>
V <sub>D1</sub>	Drain Supply Voltage 1	12V	8V
V <sub>D2</sub>	Drain Supply Voltage 2	14V	10V
V <sub>gg</sub>	Gate Supply Voltage	-10V	-6 V
I <sub>gg</sub>	Gate Current	150mA	50 mA
P <sub>IN</sub>	Input Power	17dBm	@ 3dB compression
T <sub>CH</sub>	Channel Temperature	175°C	165°C
T <sub>STG</sub>	Storage Temperature	-65/175°C	-65/175°C
P <sub>T</sub>	Total Power Dissipation	36.7W	30.9W

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  $V_{dd} \cdot I_{dd} < (T_{CH} - T_b) / R_{TH}$

### Package Dimension and Pin Assignment



Dimensions are in inches

Specifications are subject to change without notice.



# EIM8911-5

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