

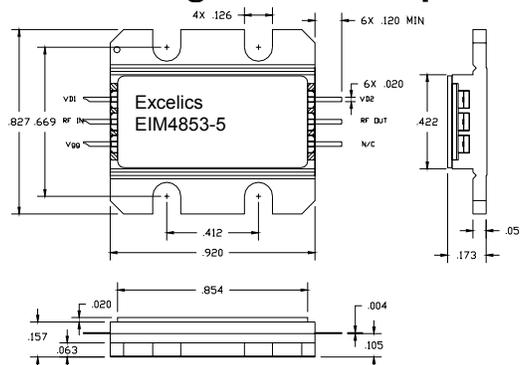
## 4.8-5.3 GHz Multi-Stage Power Amplifier

### FEATURES

- 4.8-5.3GHz Operating Frequency Range
- 36.5dBm Output Power at 1dB Compression
- 27.0 dB Typical Power Gain @1dB gain compression
- -45.0Bc Typical OIM3@ each tone Pout 24dBm
- 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, Vgg=-5V)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>F</b>	Operating Frequency Range	4.8		5.3	GHz
<b>P1dB</b>	Output Power at 1dB Gain Compression	35.5	36.5		dBm
<b>G1dB</b>	Gain @1dB gain compression	24	27		dB
<b>OIMD3</b>	Output 3 <sup>rd</sup> Order Intermodulation Distortion @Δf=10MHz, Each Tone Pout 24dBm		-45		dBc
<b>Input RL</b>	Input Return Loss		-12	-10	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		1600		mA
<b>Vgg</b>	Gate Supply Voltage		-5		V
<b>R<sub>th</sub></b>	Thermal Resistance		3.5		°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 Vgg first, then +7V and +10V.  
 ---to turn off: turn +7V and +10V off first, then turn -5V off

Specifications are subject to change without notice.

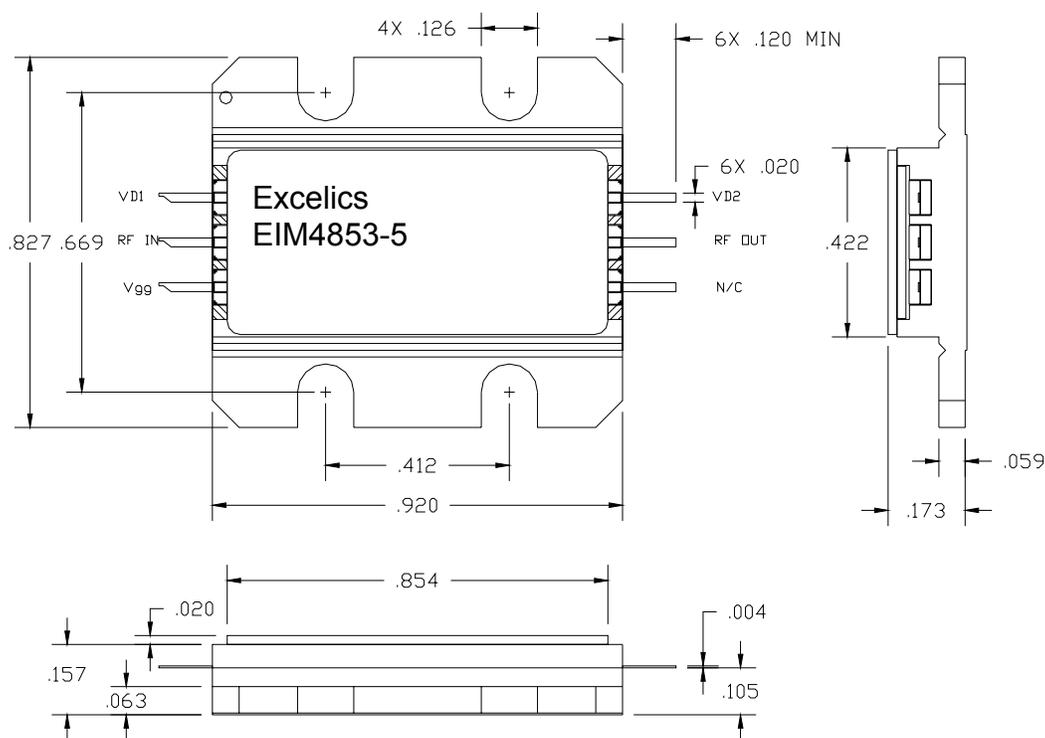
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### MAXIMUM RATINGS @Tb=25°C

SYMBOL	CHARACTERISTIC	ABSOLUTE <sup>1</sup>	OPERATING <sup>2</sup>
V <sub>D1</sub>	Drain Supply Voltage 1	11V	8V
V <sub>D2</sub>	Drain Supply Voltage 2	14V	11V
V <sub>gg</sub>	Gate Supply Voltage	-8V	-6 V
I <sub>gg</sub>	Gate Current	150mA	50 mA
P <sub>IN</sub>	Input Power	20dBm	@ 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	29.8W	25W

Notes: 1. Operating the device beyond the absolute maximum rating may cause permanent damage.  
 2. Operating beyond the operating maximum rating may reduce MTTF of the device.

### Package Dimension and Pin Assignment



Dimensions are in inches  
 \* NC: No connection inside the package



# EIM4853-5

## 4.8-5.3 GHz Multi-Stage Power Amplifier

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2. 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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