



PRELIMINARY

EIM8911-5

ISSUED: 01/21/2009

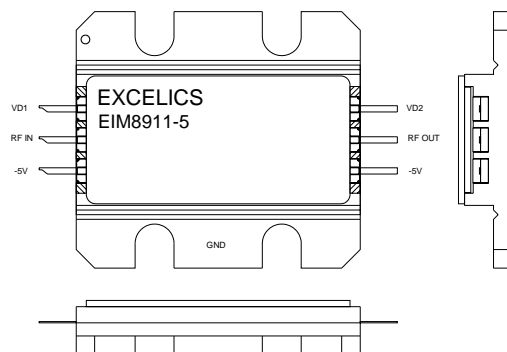
8.95-10.6GHz Multi-Stage Power Amplifier

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_b = 25 °C, 50 ohm, VD1=7V, VD2=10V, V_{gg}=-5V)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	8.95		10.6	GHz
P _{2dB}	Output Power at 2dB Gain Compression	36	37		dBm
G _{2dB}	Gain @2dB gain compression	24	26		dB
Input RL	Input Return Loss		-12	-8	dB
Output RL	Output Return Loss		-15	-10	dB
VD1	Drain Supply Voltage 1		7		V
VD2	Drain Supply Voltage 2		10		V
I _{DQ1}	Quiescent Drain Current 1		600		mA
I _{DQ2}	Quiescent Drain Current 2		1800	2000	mA
V _{gg}	Gate Supply Voltage		-5		V
R _{th}	Thermal Resistance		3.4		°C/W
ΔT _{ch}	Channel Temperature Rise			80	°C

Note: Turn on/off sequence is required:

- to turn on: apply -5V on both V_{gg} 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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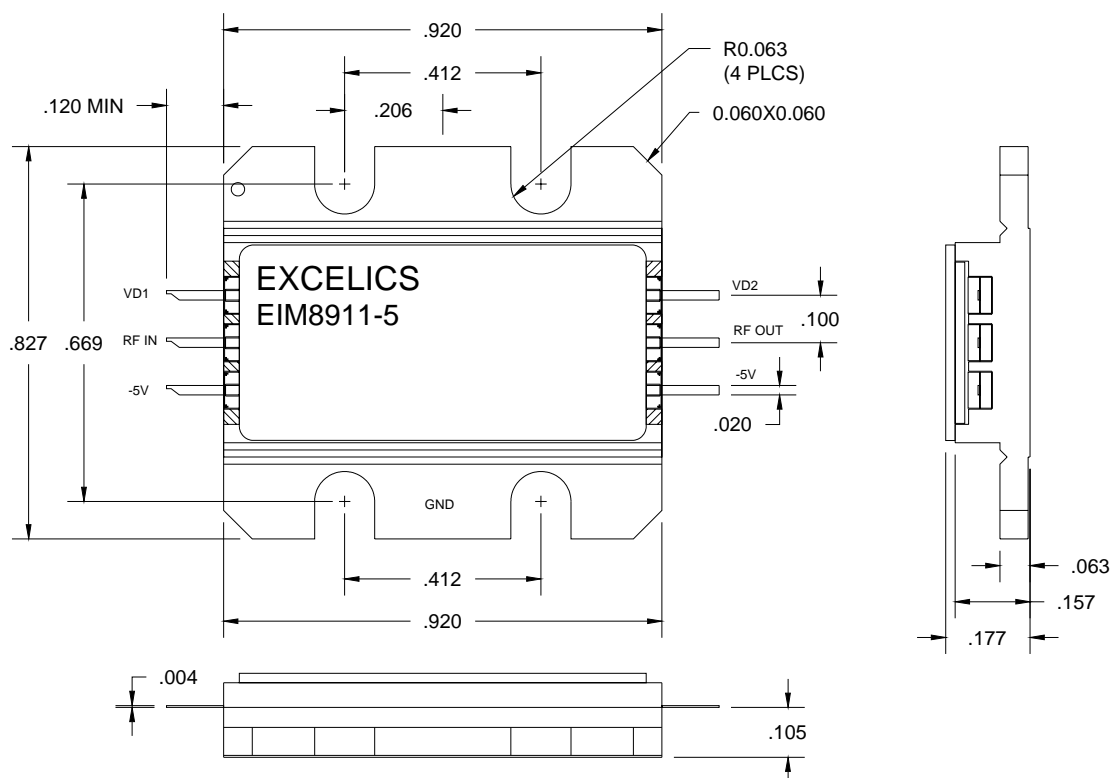
8.95-10.6GHz Multi-Stage Power Amplifier

MAXIMUM RATINGS @25°C^{1,2}

SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINUOUS ^{1,2}
V _{D1}	Drain Supply Voltage 1	12V	8V
V _{D2}	Drain Supply Voltage 2	14V	10V
V _{gg}	Gate Supply Voltage	-10V	-6 V
I _{gg}	Gate Current	150mA	50 mA
P _{IN}	Input Power	17dBm	@ 3dB compression
T _{CH}	Channel Temperature	175°C	165°C
T _{STG}	Storage Temperature	-65/175°C	-65/175°C
P _T	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



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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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