



Preliminary

EIM6775-5

ISSUED 10/09/2008

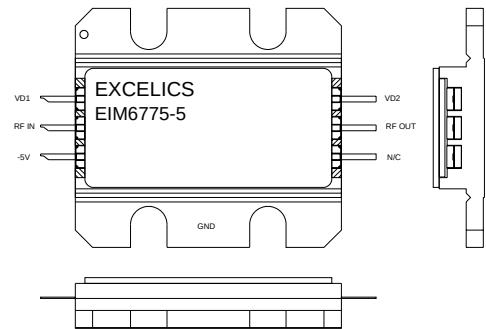
6.7 – 7.5 GHz Multi-Stage Power Amplifier

FEATURES

- 6.7– 7.5GHz Operating Frequency Range
- 37.0dBm Output Power at 2dB Compression
- 31.0 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	6.7		7.5	GHz
P2dB	Output Power at 2dB Gain Compression	36.0	37.0		dBm
G2dB	Gain @2dB gain compression	29	31		dB
ΔGain	Gain Flatness		±1.0		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		200		mA
I _{DQ2}	Quiescent Drain Current 2		2600	3000	mA
V _{gg}	Gate Supply Voltage		-5		V
R _{th}	Thermal Resistance		2.4		°C/W
T _b	Operating Base Plate Temperature	- 30		+ 80	°C

Specifications are subject to change without notice.

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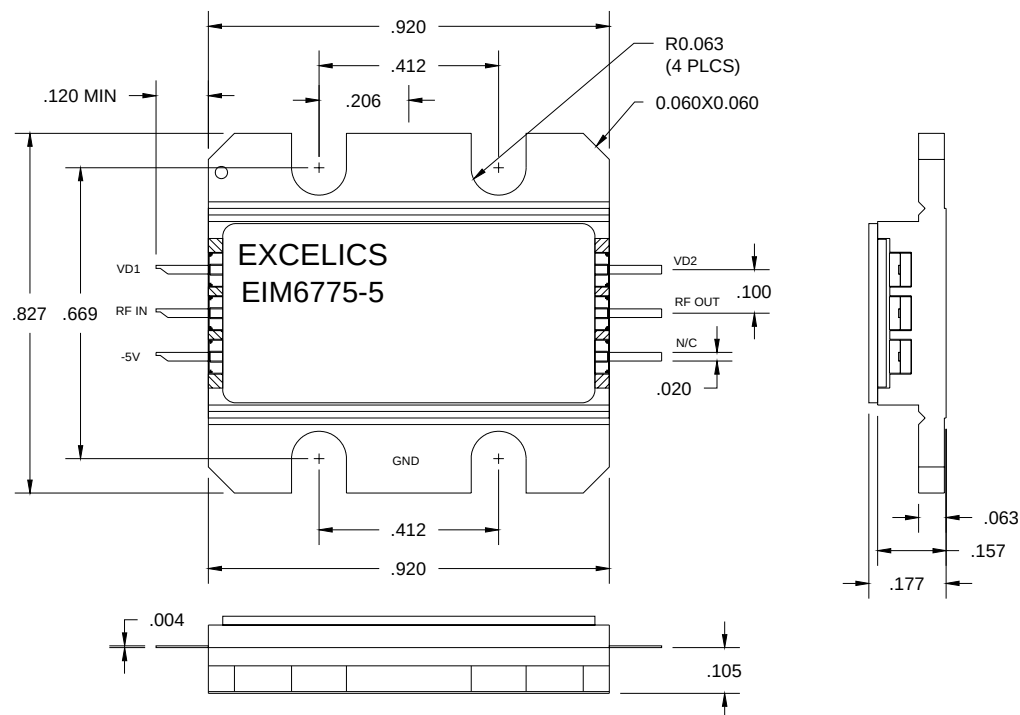
MAXIMUM RATINGS @25°C^{1,2}

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	20dBm	@ Pout 2dB compression
T _{CH}	Channel Temperature	175°C	175°C
T _{STG}	Storage Temperature	-65/175°C	-65/175°C
P _T	Total Power Dissipation	37.5W	37.5W

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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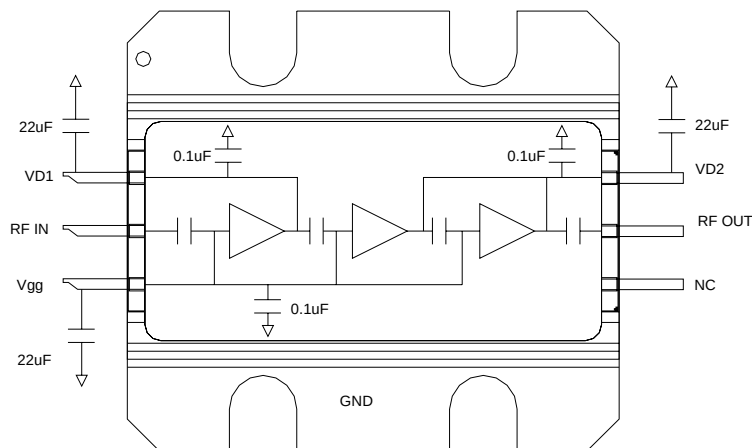
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Application Note

1. The package should be screwed onto a good heat sink and ground
2. Turn on/off sequence is required:
 - to turn on: apply -5V first, then +7V and +10V.
 - to turn off: turn +7V and +10V off first, then turn -5V off
3. Recommended External Bias Circuit and Internal Block Diagram



Typical Performance:

TBD

S-PARAMETERS

TBD

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