



# EIM0618-3

UPDATED 11/01/2005

## 6.0 – 18.0 GHz 3-Watt Power Module

### FEATURES

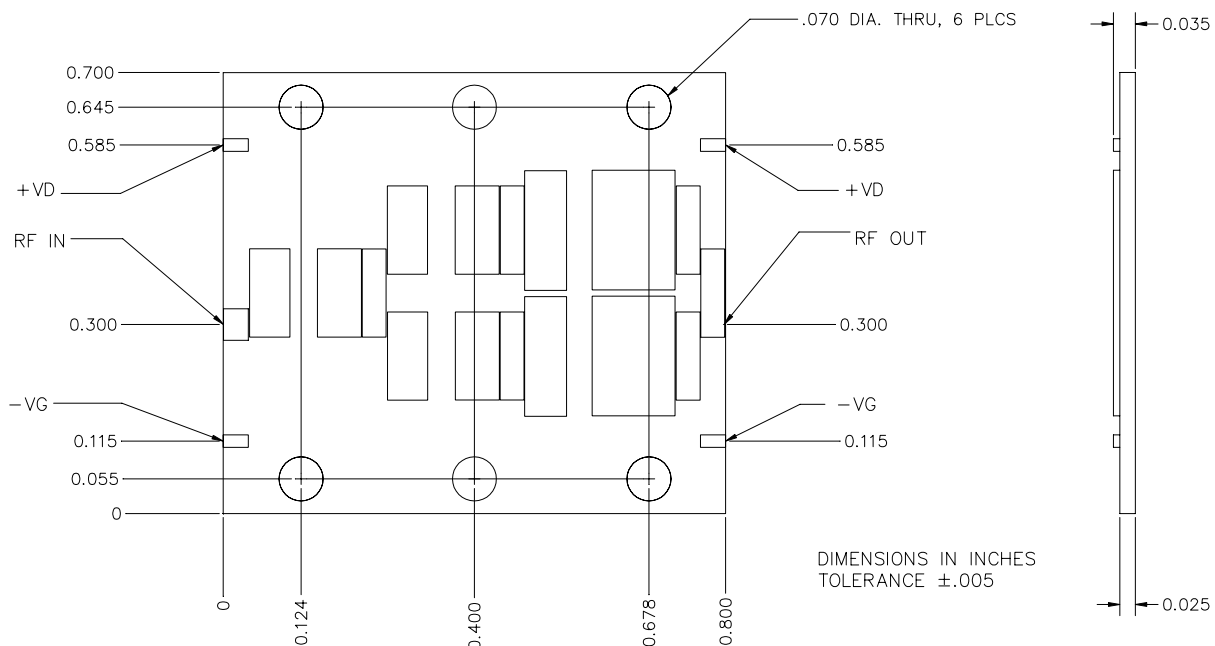
- 6.0 – 18.0 GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +35.0 dBm Output Power at 1dB Compression
- 25.5 dB Power Gain at 1dB Compression
- 30% Power Added Efficiency



Caution! ESD sensitive device.

### ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)

SYMBOL	PARAMETERS/TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>P<sub>1dB</sub></b>	Output Power at 1dB Compression V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 1500mA f = 6.0-18.0GHz	34.0	35.0		dBm
<b>G<sub>1dB</sub></b>	Gain at 1dB Compression V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 1500mA f = 6.0-18.0GHz	24.0	25.5		dB
<b>ΔG</b>	Gain Flatness V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 1500mA f = 6.0-18.0GHz			±2.0	dB
<b>VSWR</b>	Input/Output VSWR f = 6.0-18.0GHz		1.5:1	2.0:1	
<b>PAE</b>	Power Added Efficiency at 1dB Compression V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 1500mA f = 6.0-18.0 GHz		30		%
<b>I<sub>d1dB</sub></b>	Drain Current at 1dB Compression f = 6.0-18.0 GHz		1500	2000	mA



OUTLINE DRAWING

Specifications are subject to change without notice.

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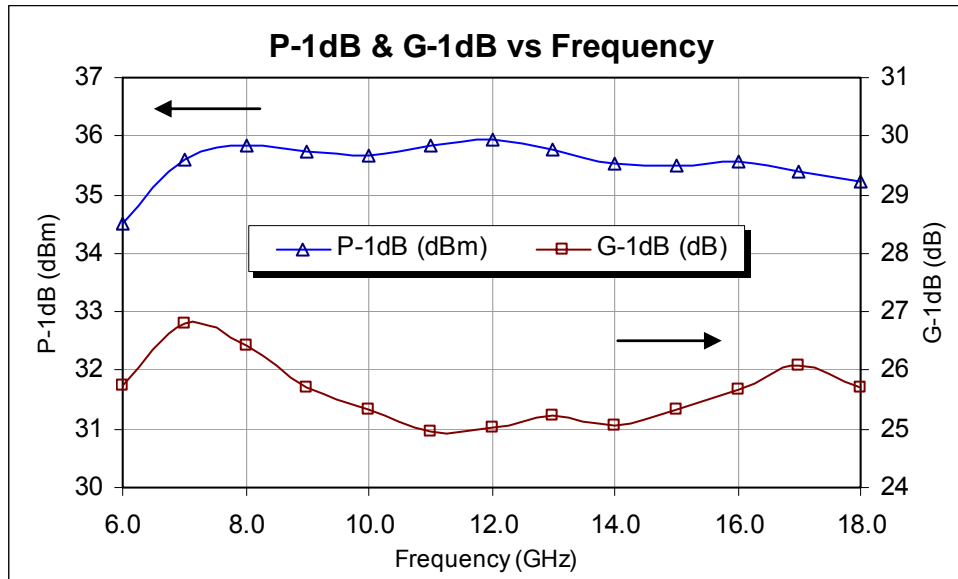
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### ABSOLUTE MAXIMUM RATINGS FOR CONTINUOUS OPERATION<sup>1,2</sup>

SYMBOL	CHARACTERISTIC	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
V <sub>DS</sub>	Drain to Source Voltage	12 V	8 V
V <sub>GS</sub>	Gate to Source Voltage	-8 V	-3 V
I <sub>DS</sub>	Drain Current	IDSS	3.04 A
I <sub>GSF</sub>	Forward Gate Current	500 mA	86 mA
P <sub>IN</sub>	Input Power	27 dBm	@ 3dB compression
P <sub>T</sub>	Total Power Dissipation	28.8 W	24.2 W
T <sub>CH</sub>	Channel Temperature	175°C	150°C
T <sub>STG</sub>	Storage Temperature	-65/+175°C	-65/+150°C

Note: 1. Exceeding any of the above ratings may result in permanent damage.  
 2. Exceeding any of the above ratings may reduce MTTF below design goals.

Typical Power Data (V<sub>DS</sub> = 8 V, I<sub>DSQ</sub> = 1500 mA)



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