

### FEATURES

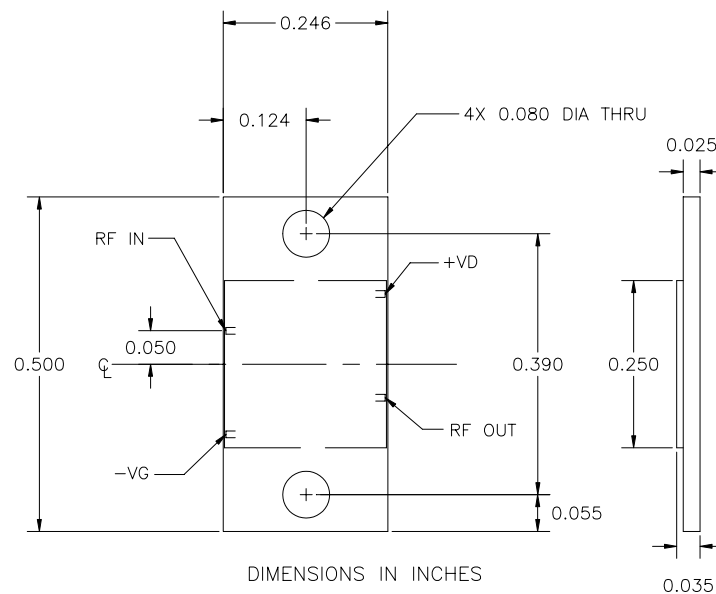
- 6.0 – 18.0 GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +27.0 dBm Output Power at 1dB Compression
- 8.5 dB Power Gain at 1dB Compression
- 30% Power Added Efficiency



Caution! ESD sensitive device.

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

| SYMBOL            | PARAMETERS/TEST CONDITIONS  | MIN  | TYP   | MAX   | UNITS |
|-------------------|---|------|-------|-------|-------|
| P <sub>1dB</sub>  | Output Power at 1dB Compression<br>V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 180mA<br>f = 6.0-18.0GHz            | 26.0 | 27.0  |       | dBm   |
| G <sub>1dB</sub>  | Gain at 1dB Compression<br>V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 180mA<br>f = 6.0-18.0GHz                    | 7.5  | 8.5   |       | dB    |
| ΔG                | Gain Flatness<br>V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 180mA<br>f = 6.0-18.0GHz                              |      |       | ±1.0  | dB    |
| VSWR              | Input/Output VSWR<br>f = 6.0-18.0GHz  |      | 1.5:1 | 2.0:1 |       |
| PAE               | Power Added Efficiency at 1dB Compression<br>V <sub>DS</sub> = 8 V, I <sub>DQ</sub> ≈ 180mA<br>f = 6.0-18.0 GHz |      | 30    |       | %     |
| I <sub>d1dB</sub> | Drain Current at 1dB Compression<br>f = 6.0-18.0 GHz  |      | 200   | 250   | mA    |



OUTLINE DRAWING

Specifications are subject to change without notice.



# EIM0618-0.5

UPDATED 02/03/2005

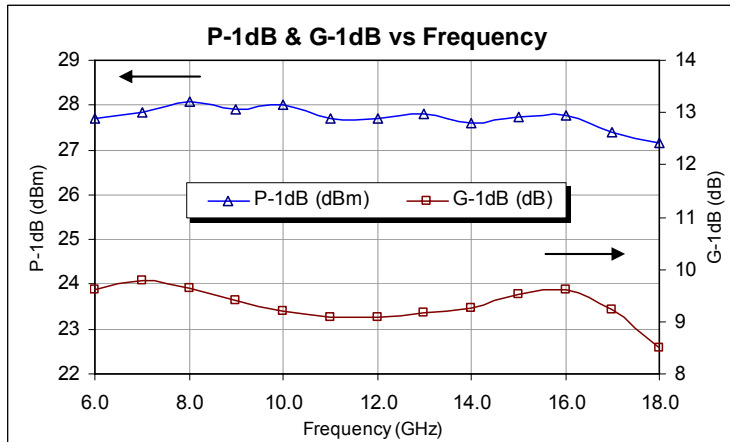
## 6.0 – 18.0 GHz ½-Watt Power Module

### 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                  | 380 mA                  |
| I <sub>GSF</sub> | Forward Gate Current    | 60 mA                 | 10 mA                   |
| P <sub>IN</sub>  | Input Power             | 27 dBm                | @ 3dB compression       |
| P <sub>T</sub>   | Total Power Dissipation | 3.6 W                 | 3.0 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> = 180 mA)



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