

**FEATURES**

- n **LOW INTERMODULATION DISTORTION**      n **HIGH GAIN**  
     IM3=-45 dBc at Pout= 35.0dBm                      G1dB=8.0dB at 6.4GHz to 7.2GHz  
     Single Carrier Level
- n **HIGH POWER**                                      n **BROADBAND INTERNALLY MATCHED**  
     P1dB=45.5dBm at 6.4GHz to 7.2GHz              n **HERMETICALLY SEALED PACKAGE**

**RF PERFORMANCE SPECIFICATIONS ( Ta= 25°C )**

| CHARACTERISTICS                            | SYMBOL | CONDITIONS                             | UNIT | MIN. | TYP. | MAX. |
|--|--------|--|------|------|------|------|
| Output Power at 1dB Gain Compression Point | P1dB   | VDS= 10V<br>f = 6.4 to 7.2GHz          | dBm  | 45.0 | 45.5 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB   |  | dB   | 7.0  | 8.0  | —    |
| Drain Current                              | IDS1   |  | A    | —    | 8.0  | 9.0  |
| Gain Flatness                              | ΔG     |  | dB   | —    | —    | ±0.8 |
| Power Added Efficiency                     | ηadd   |  | %    | —    | 37   | —    |
| 3rd Order Intermodulation Distortion       | IM3    | Two Tone Test<br>Po=35.0dBm            | dBc  | -42  | -45  | —    |
| Drain Current                              | IDS2   | (Single Carrier Level)                 | A    | —    | 8.0  | 9.0  |
| Channel Temperature Rise                   | ΔTch   | (VDS X IDS + Pin - P1dB)<br>X Rth(c-c) | °C   | —    | —    | 100  |

**Recommended Gate Resistance(Rg) : 28 W (Max.)**

**ELECTRICAL CHARACTERISTICS ( Ta= 25°C )**

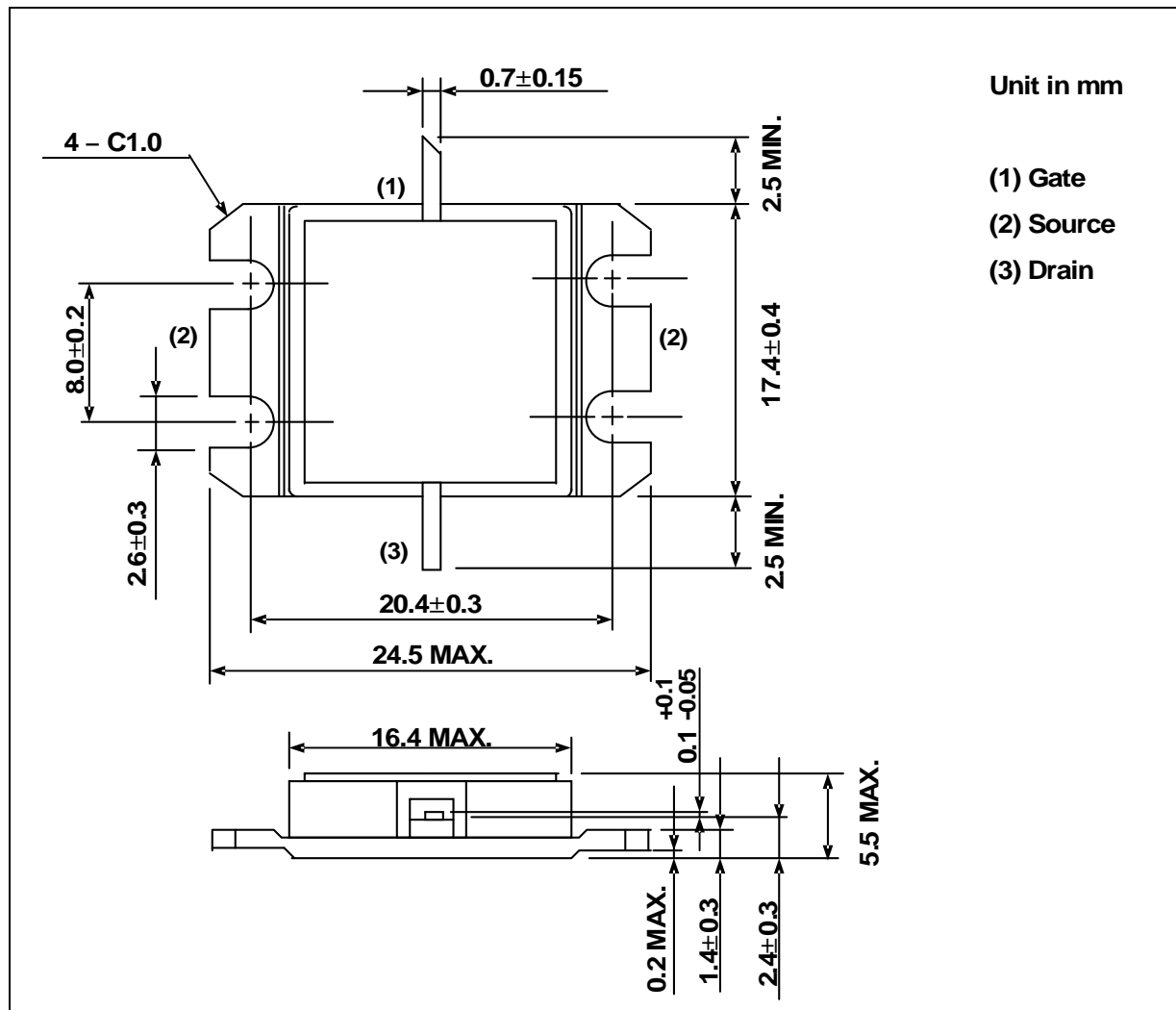
| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 10.5A | mS   | —    | 6500 | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 140mA | V    | -1.0 | -2.5 | -4.0 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V    | A    | —    | 20   | 26   |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -420mA           | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case       | °C/W | —    | 1.0  | 1.3  |

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**ABSOLUTE MAXIMUM RATINGS ( Ta= 25°C )**

| CHARACTERISTICS                                  | SYMBOL           | UNIT | RATING      |
|--|------------------|------|-------------|
| Drain-Source Voltage                             | V <sub>DS</sub>  | V    | 15          |
| Gate-Source Voltage                              | V <sub>GS</sub>  | V    | -5          |
| Drain Current                                    | I <sub>DS</sub>  | A    | 20          |
| Total Power Dissipation (T <sub>c</sub> = 25 °C) | PT               | W    | 115.4       |
| Channel Temperature                              | T <sub>ch</sub>  | °C   | 175         |
| Storage Temperature                              | T <sub>stg</sub> | °C   | -65 to +175 |

**PACKAGE OUTLINE (2-16G1B)**

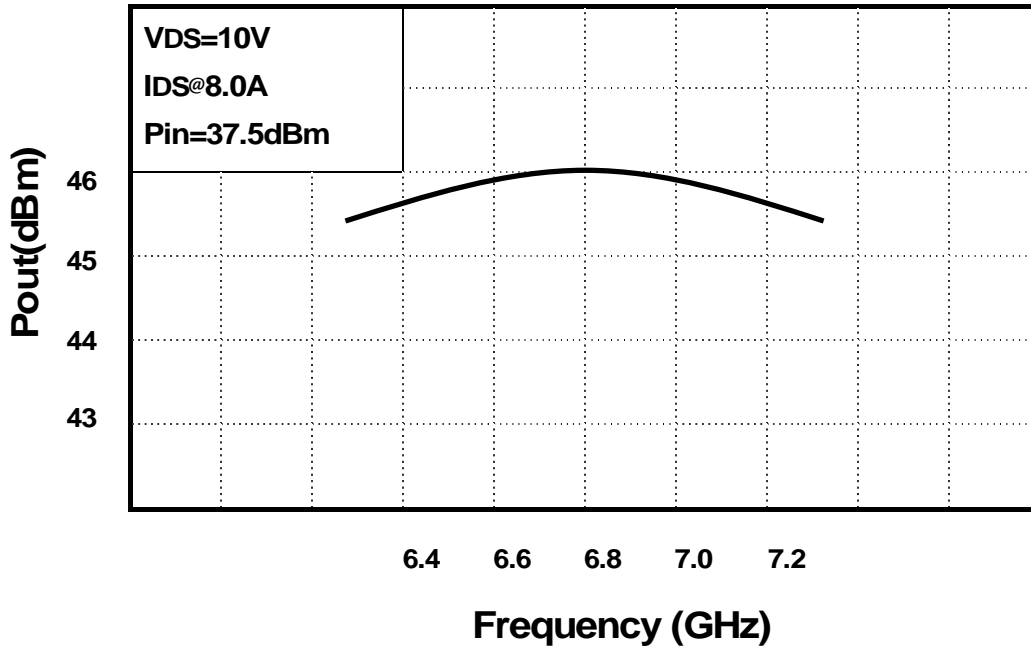


**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

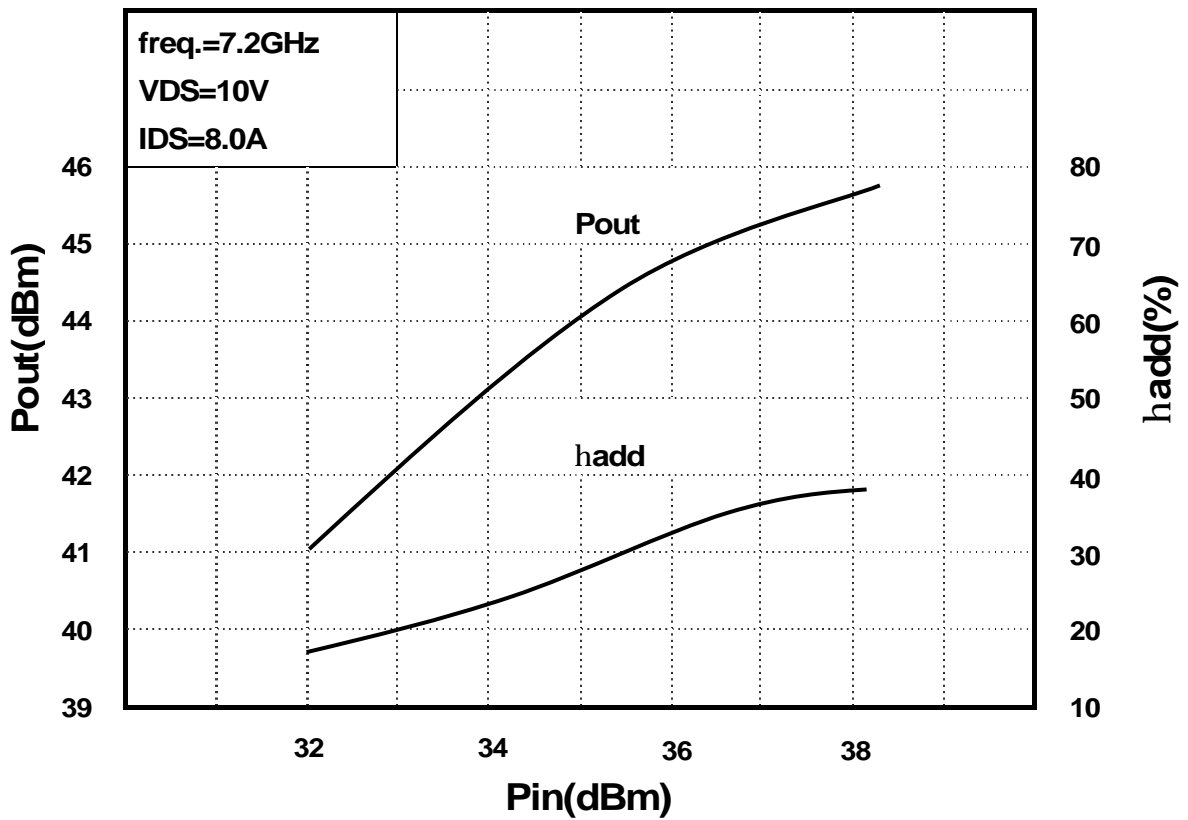
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

**RF PERFORMANCES**

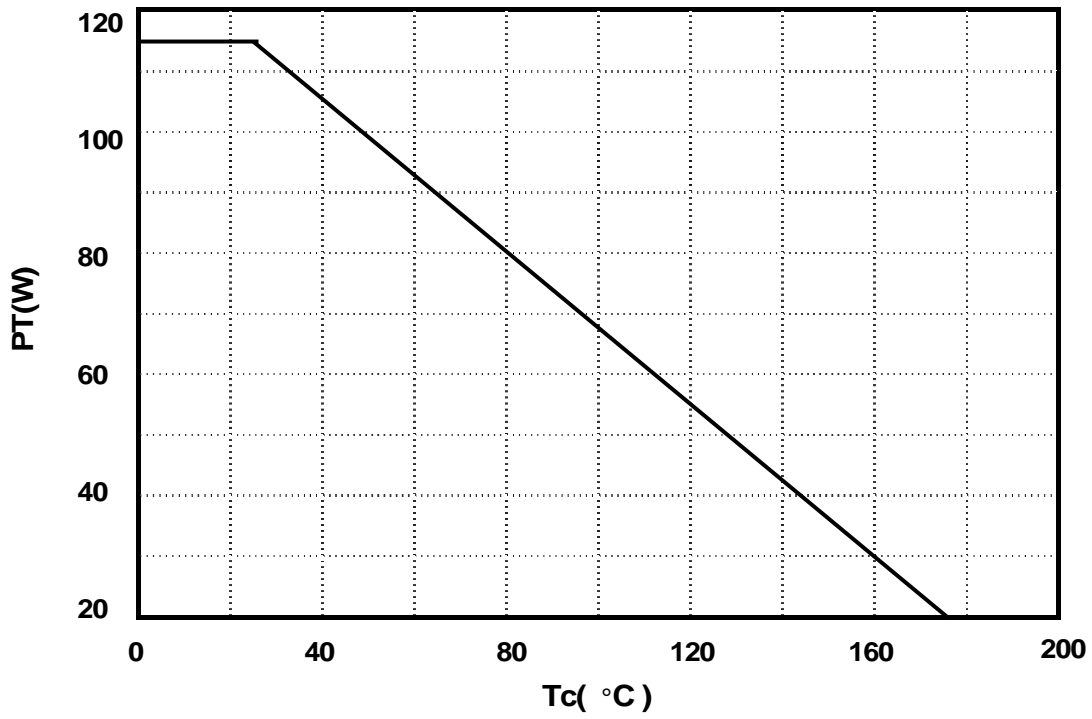
**Output Power (Pout) vs. Frequency**



**Output Power(Pout) vs. Input Power(Pin)**



**Power Dissipation(PT) vs. Case Temperature(Tc)**



**IM3 vs. Power Characteristics**

