

### FEATURES

**LOW INTERMODULATION DISTORTION**

IM3=-45 dBc at Po= 34.5 dBm,  
Single Carrier Level

**HIGH POWER**

P1dB=45.0 dBm at 5.9GHz to 6.4GHz

**HIGH GAIN**

G1dB=8.0dB at 5.9GHz to 6.4GHz

**BROAD BAND INTERNALLY MATCHED FET**

**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 = 5.9 to 6.4GHz          | dBm  | 44.0 | 45.0 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB   |                                       | dB   | 7.0  | 8.0  | —    |
| Drain Current                              | IDS1   |                                       | A    | —    | 7.0  | 8.0  |
| Gain Flatness                              | ΔG     |                                       | dB   | —    | —    | ±0.8 |
| Power Added Efficiency                     | ηadd   |                                       | %    | —    | 38   | —    |
| 3rd Order Intermodulation Distortion       | IM3    | Two-Tone Test<br>Po=34.5 dBm          | dBc  | -42  | -45  | —    |
| Drain Current                              | IDS2   | (Single Carrier Level)                | A    | —    | 7.0  | 8.0  |
| Channel Temperature Rise                   | ΔTch   | (VDS X IDS +Pin - P1dB)<br>X Rth(c-c) | °C   | —    | —    | 100  |

Recommended gate resistance(Rg) : Rg= 28 W(MAX.)

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

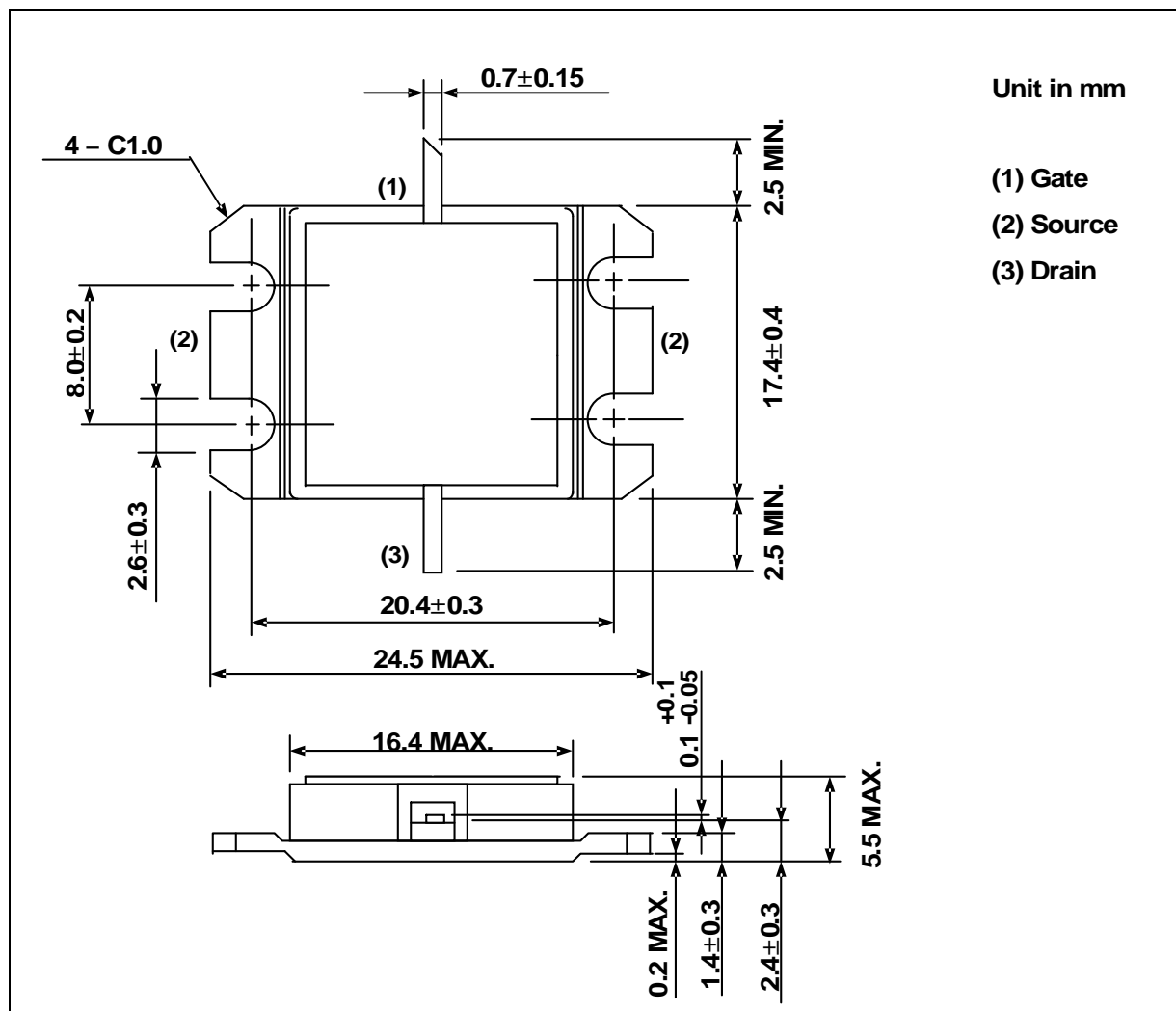
| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 10A   | mS   | —    | 6300 | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 100mA | V    | -1.0 | -2.5 | -4.0 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V    | A    | —    | 18   | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -350μA           | 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 )**

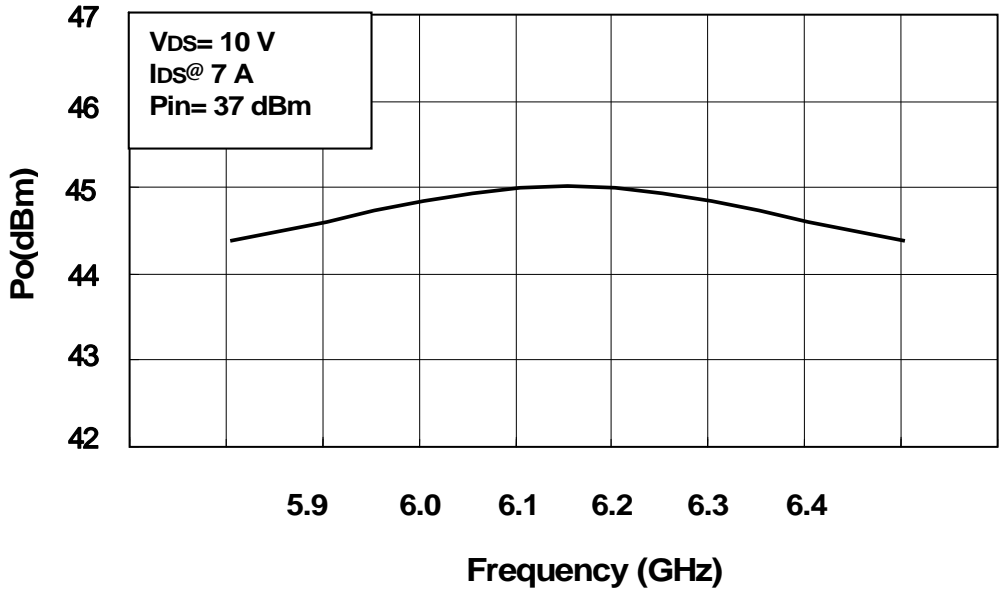
| CHARACTERISTICS                     | SYMBOL | UNIT | RATING      |
|-------------------------------------|--------|------|-------------|
| Drain-Source Voltage                | VDS    | V    | 15          |
| Gate-Source Voltage                 | VGS    | V    | -5          |
| Drain Current                       | IDS    | A    | 20          |
| Total Power Dissipation (Tc= 25 °C) | PT     | W    | 115.4       |
| Channel Temperature                 | Tch    | °C   | 175         |
| Storage                             | Tstg   | °C   | -65 to +175 |

**PACKAGE OUTLINE (2-16G1B)****HANDLING PRECAUTIONS FOR PACKAGE MODEL**

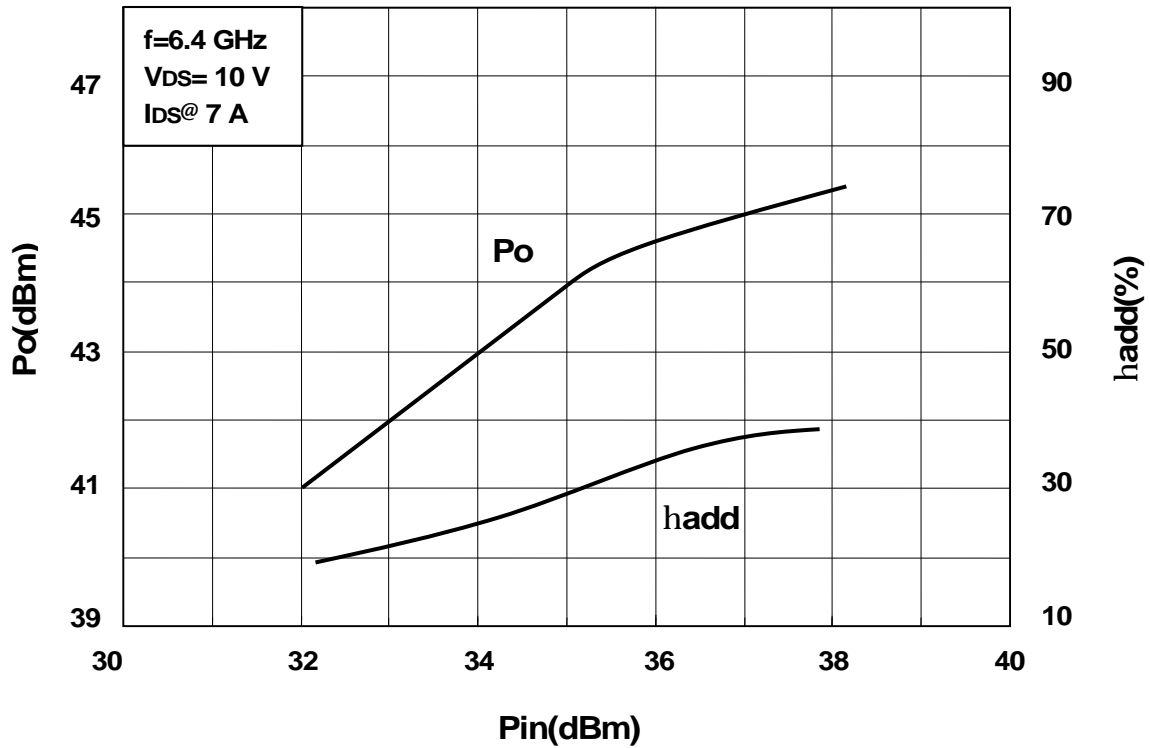
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCE

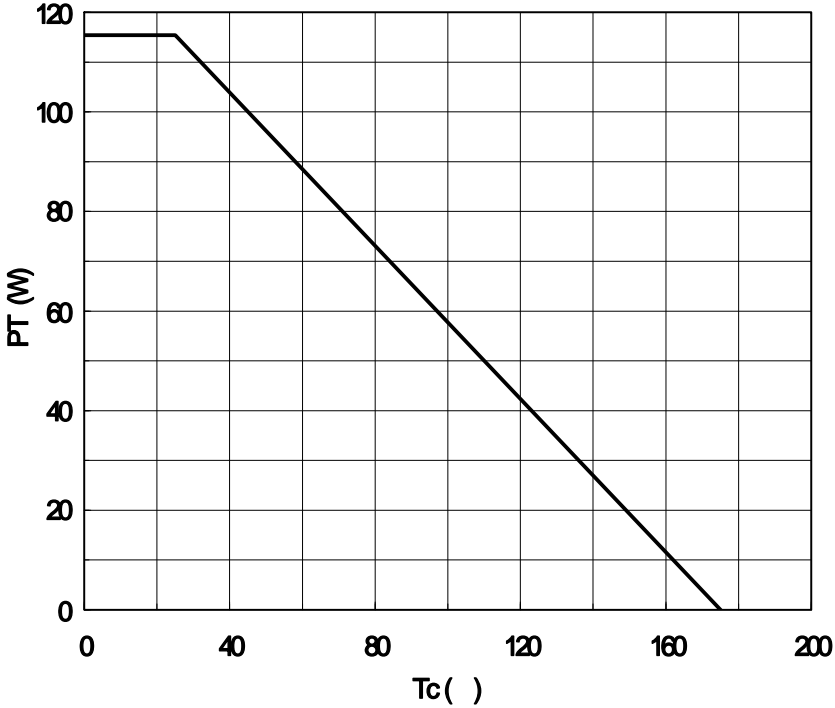
Output Power vs. Frequency



Output Power vs. Input Power



Power Dissipation vs. Case Temperature



IM3 vs. Output Power Characteristics

