

**FEATURES**

- **LOW INTERMODULATION DISTORTION**  
 IM3=-45 dBc at Pout= 28.0dBm  
 Single Carrier Level
- **HIGH POWER**  
 P1dB=39.5 dBm at 14.0 GHz to 14.5 GHz
- **HIGH GAIN**  
 G1dB=5.0 dB at 14.0 GHz to 14.5 GHz
- **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= 9V<br>f= 14.0 to 14.5GHz          | dBm  | 38.5 | 39.5 | —    |
| Power Gain at 1dB Gain Compression Point         | G1dB            |  | dB   | 4.0  | 5.0  | —    |
| Drain Current                                    | IDS1            |  | A    | —    | 3.4  | 4.4  |
| Power Added Efficiency                           | $\eta_{add}$    |  | %    | —    | 20   | —    |
| 3 <sup>rd</sup> Order Intermodulation Distortion | IM3             | Two-Tone Test<br>Po=28. 0dBm           | dBc  | -42  | -45  | —    |
| Drain Current                                    | IDS2            | (Single Carrier Level)                 | A    | —    | 3.4  | 4.4  |
| Channel Temperature Rise                         | $\Delta T_{ch}$ | (VDS X IDS + Pin – P1dB)<br>X Rth(c-c) | °C   | —    | —    | 80   |

**Recommended gate resistance(Rg) : Rg= 150  $\Omega$ (MAX.)**

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

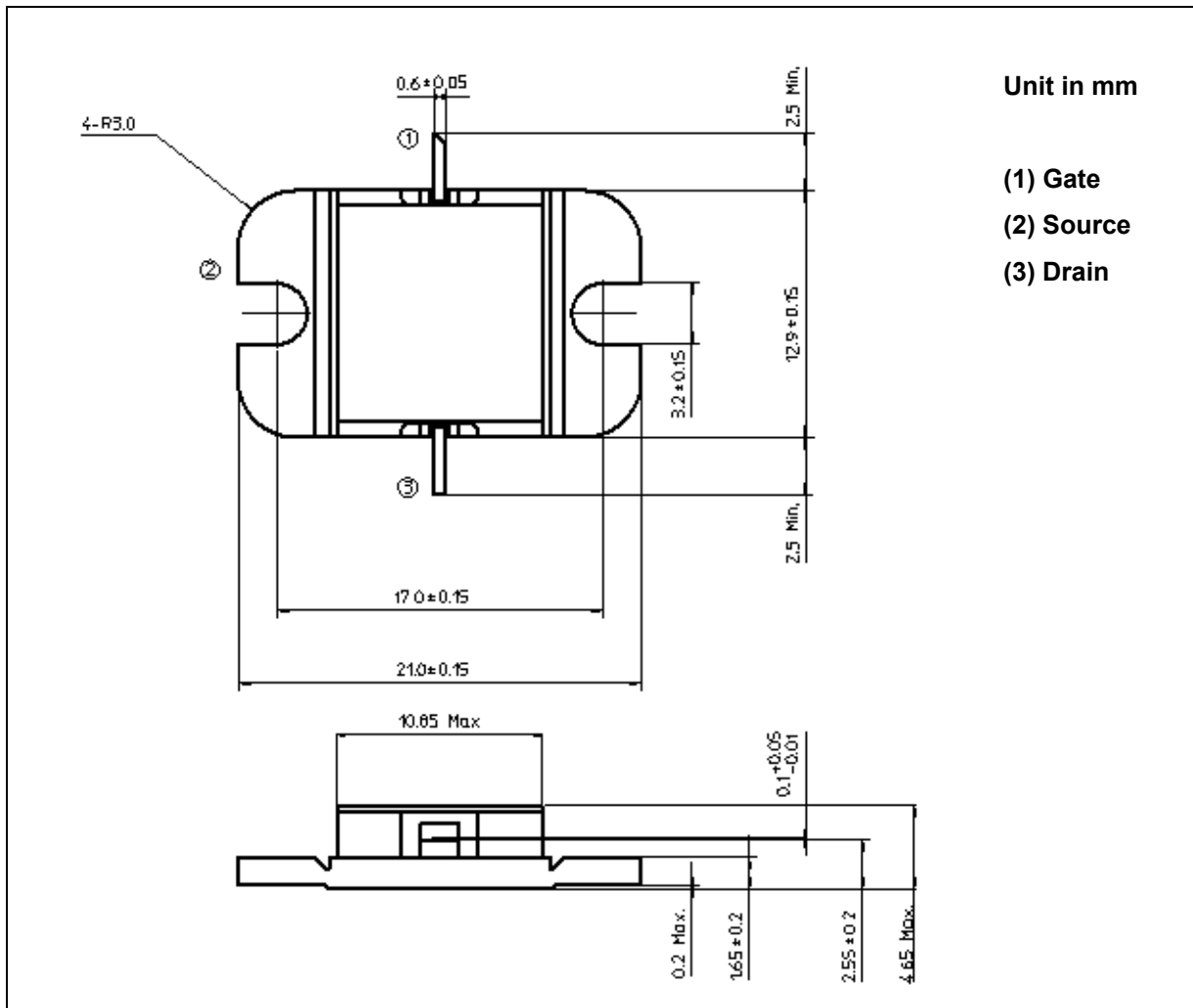
| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 4.0 A | mS   | —    | 2400 | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 120mA | V    | -2.0 | -3.5 | -5.0 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V    | A    | —    | 8.0  | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -120 $\mu$ A     | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case       | °C/W | —    | 1.6  | 2.5  |

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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    | 10.4        |
| Total Power Dissipation (Tc= 25 °C) | PT     | W    | 60          |
| Channel Temperature                 | Tch    | °C   | 175         |
| Storage Temperature                 | Tstg   | °C   | -65 to +175 |

**PACKAGE OUTLINE (2-11C1B)**

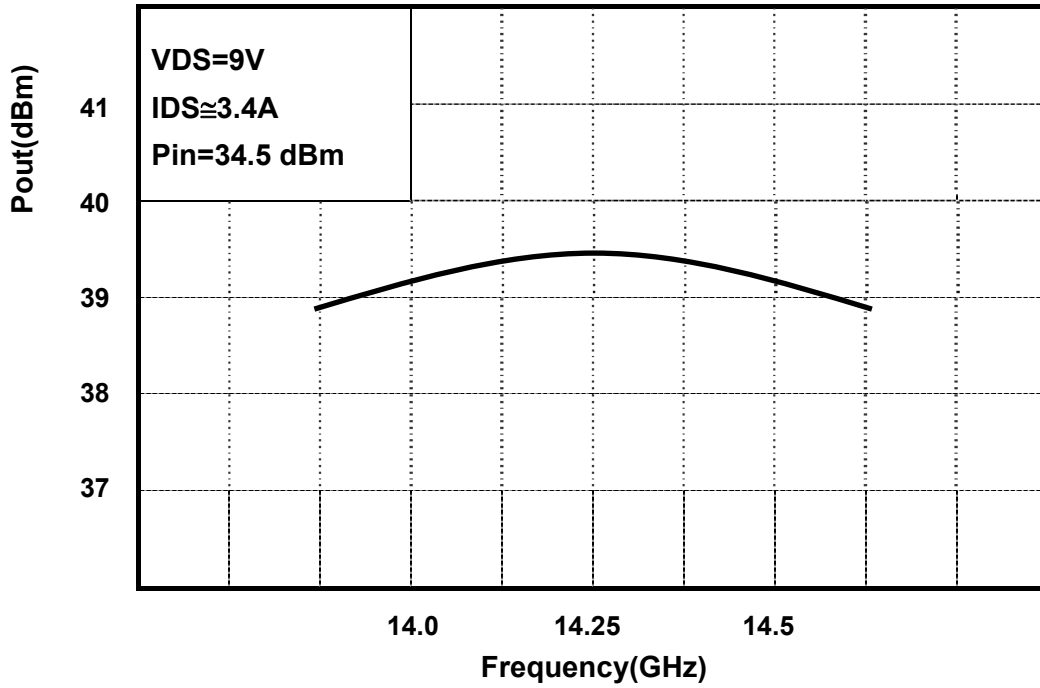


**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

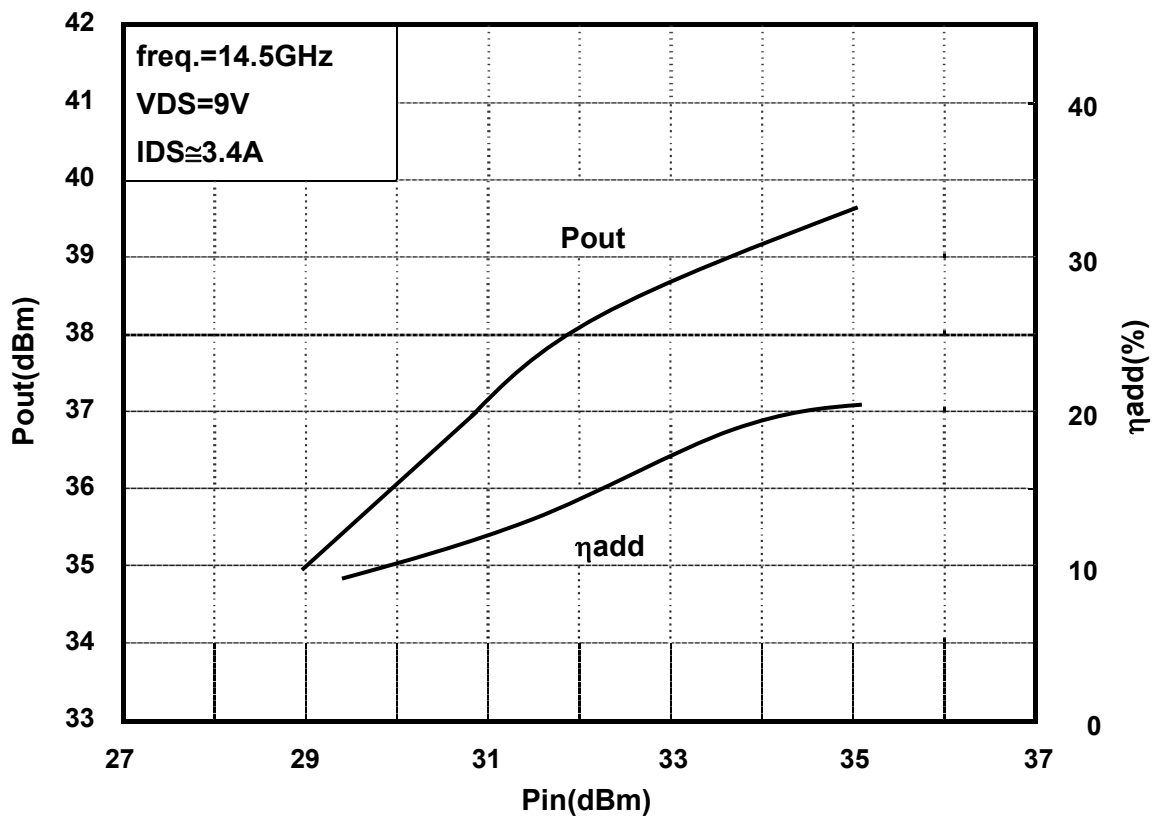
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

**RF PERFORMANCE**

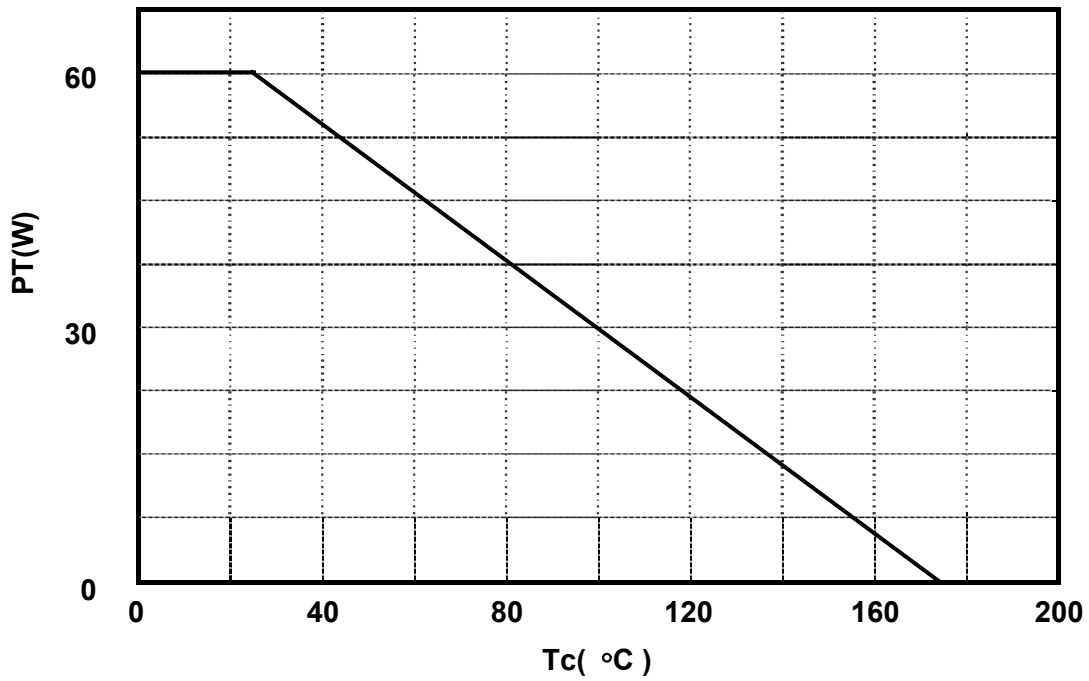
**Output Power (Pout) vs. Frequency**



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



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



IM3 vs. Output Power Characteristics

