

**FEATURES**

- BROAD BAND INTERNALLY MATCHED FET
- HIGH POWER  
P1dB= 42.0dBm at 13.75GHz to 14.5GHz
- HIGH GAIN  
G1dB= 6.0dB at 13.75GHz to 14.5GHz
- LOW INTERMODULATION DISTORTION  
IM3(Min.)= -25dBc at Pout= 36.0dBm  
Single Carrier Level
- 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>IDSset= 4.4A<br>f = 13.75 to 14.5GHz                           | dBm  | 41.5 | 42.0 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB            |   | dB   | 5.0  | 6.0  | —    |
| Drain Current                              | IDS1            |   | A    | —    | 5.5  | 6.0  |
| Power Added Efficiency                     | $\eta_{add}$    |   | %    | —    | 28   | —    |
| 3rd Order Intermodulation Distortion       | IM3             | Two Tone Test<br>Po= 36.0dBm, $\Delta f$ = 5MHz<br>(Single Carrier Level) | dBc  | -25  | —    | —    |
| Drain Current                              | IDS2            |   | A    | —    | 5.5  | 6.0  |
| Channel Temperature Rise                   | $\Delta T_{ch}$ | (VDS X IDS + Pin – P1dB) X Rth(c-c)                                       | °C   | —    | —    | 100  |

**Recommended Gate Resistance(Rg): 100  $\Omega$**

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

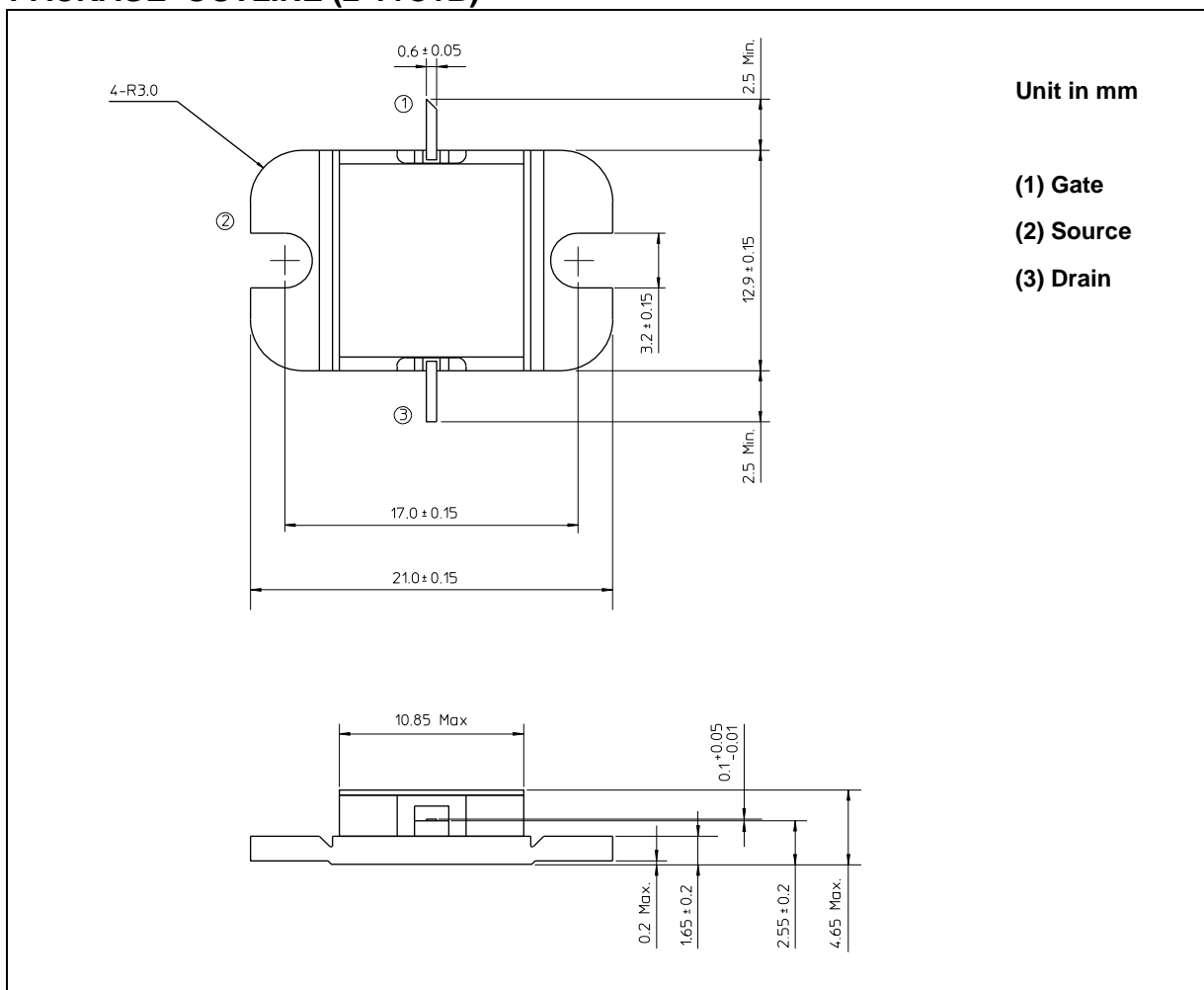
| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 4.8A  | S    | —    | 4.5  | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 145mA | V    | -0.7 | -2.8 | -4.5 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V    | A    | —    | 10.0 | 11.5 |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -145 $\mu$ A     | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case       | °C/W | —    | 1.8  | 2.3  |

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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    | 11.5        |
| Total Power Dissipation (Tc= 25°C) | PT     | W    | 65          |
| Channel Temperature                | Tch    | °C   | 175         |
| Storage                            | Tstg   | °C   | -65 to +175 |

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

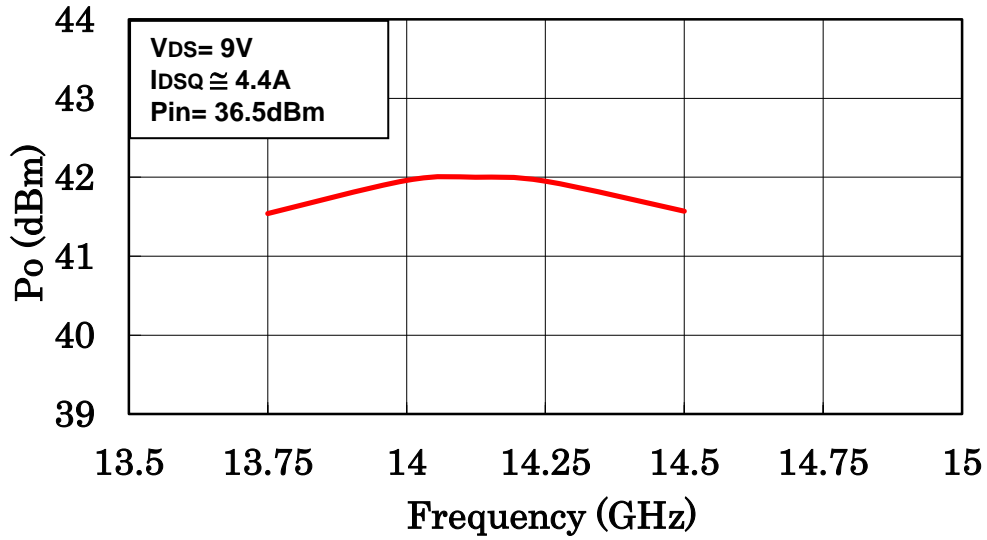


**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

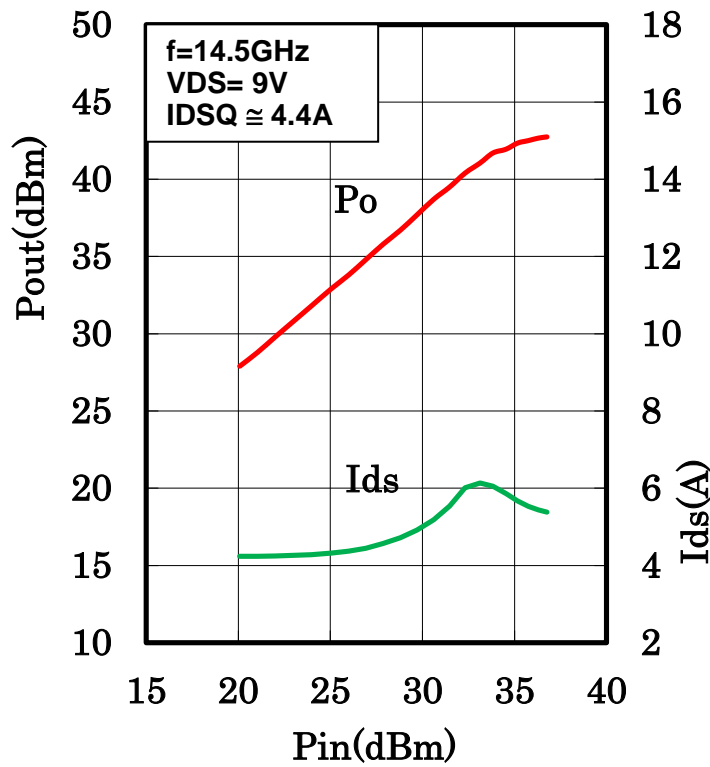
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

**RF PERFORMANCE**

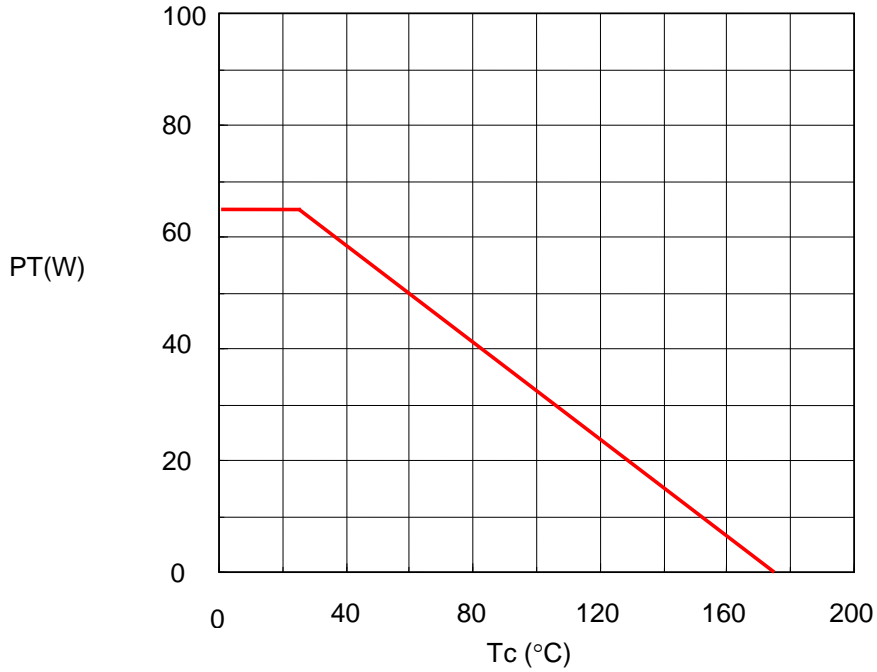
**Output Power vs. Frequency**



**Output power vs. Input power**



**POWER DISSIPATION vs. CASE TEMPERATURE**



**IM3 vs. OUTPUT POWER CHARACTERISTICS**

