

### FEATURES

- BROAD BAND INTERNALLY MATCHED FET
- HIGH POWER  
P1dB= 38.0dBm at 13.75GHz to 14.5GHz
- HIGH GAIN  
G1dB= 6.0dB at 13.75GHz to 14.5GHz
- 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= 2.0A<br>f= 13.75 to 14.5GHz | dBm  | 37.0 | 38.0 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB            |  | dB   | 5.0  | 6.0  | —    |
| Drain Current                              | IDS             |  | A    | —    | 2.25 | 2.75 |
| Power Added Efficiency                     | $\eta_{add}$    |  | %    | —    | 23   | —    |
| Channel Temperature Rise                   | $\Delta T_{ch}$ | (VDS X IDS + Pin – P1dB) X Rth(c-c)            | °C   | —    | —    | 80   |

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

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

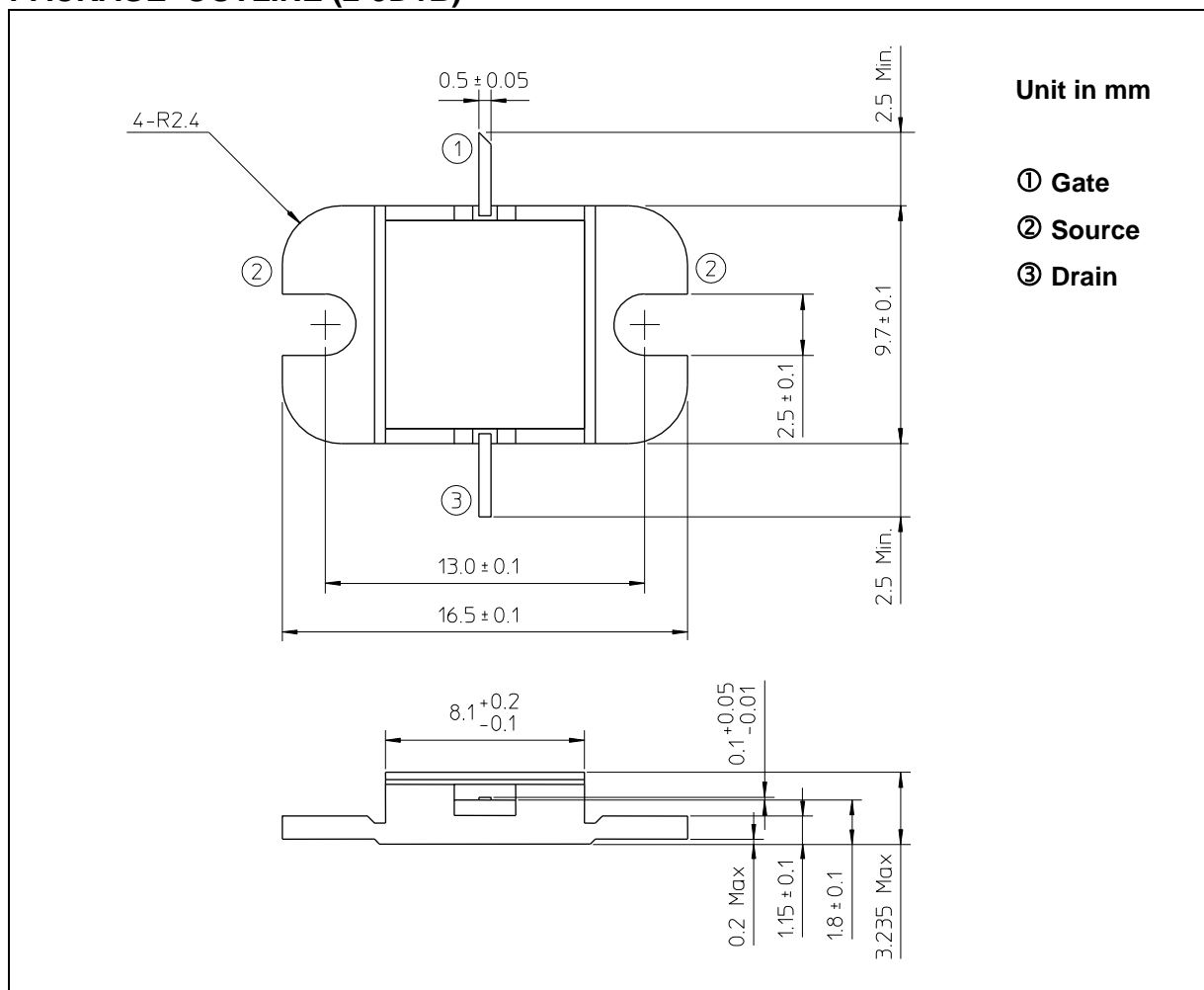
| CHARACTERISTICS               | SYMBOL   | CONDITIONS           | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 2.4A | S    | —    | 1.5  | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 72mA | V    | -1.5 | -3.0 | -4.5 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V   | A    | —    | 5.0  | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -72 $\mu$ A     | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case      | °C/W | —    | 3.0  | 3.7  |

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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    | 5.7         |
| Total Power Dissipation (Tc= 25°C) | PT     | W    | 40.5        |
| Channel Temperature                | Tch    | °C   | 175         |
| Storage Temperature                | Tstg   | °C   | -65 to +175 |

**PACKAGE OUTLINE (2-9D1B)**

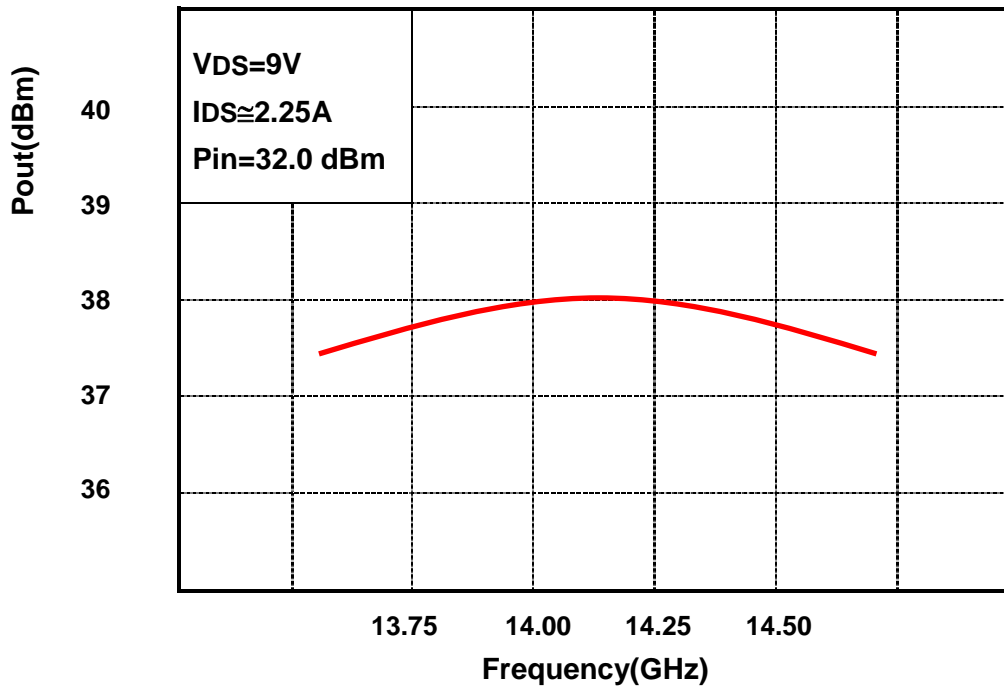


**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

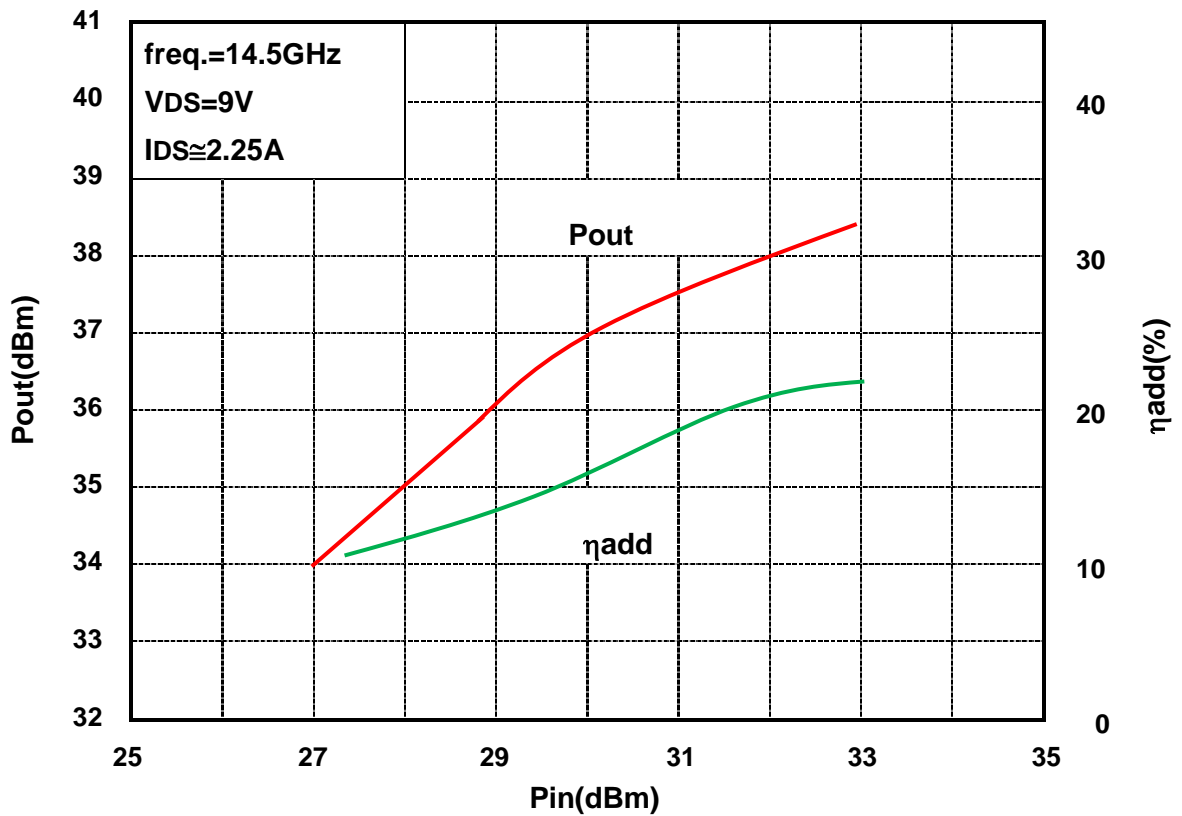
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

**RF PERFORMANCE**

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



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



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

