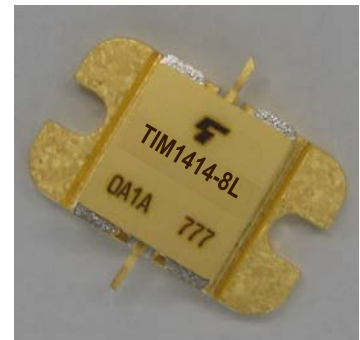


## FEATURES

- BROAD BAND INTERNALLY MATCHED FET
- HIGH POWER  
P1dB= 39.5dBm at 14.0GHz to 14.5GHz
- HIGH GAIN  
G1dB= 5.0dB at 14.0GHz to 14.5GHz
- LOW INTERMODULATION DISTORTION  
IM3= -45dBc at Pout= 28.0dBm  
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= 4.0A<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       |
| Gain Flatness                              | $\Delta G$      |                                                                           | dB   | —    | —    | $\pm 0.8$ |
| Power Added Efficiency                     | $\eta_{add}$    |                                                                           | %    | —    | 20   | —         |
| 3rd Order Intermodulation Distortion       | IM3             | Two Tone Test<br>Po= 28.0dBm, $\Delta f$ = 5MHz<br>(Single Carrier Level) | dBc  | -42  | -45  | —         |
| Drain Current                              | IDS2            |                                                                           | A    | —    | 3.4  | 4.4       |
| Channel Temperature Rise                   | $\Delta T_{ch}$ | (VDS X IDS + Pin – P1dB) X Rth(c-c)                                       | °C   | —    | —    | 80        |

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

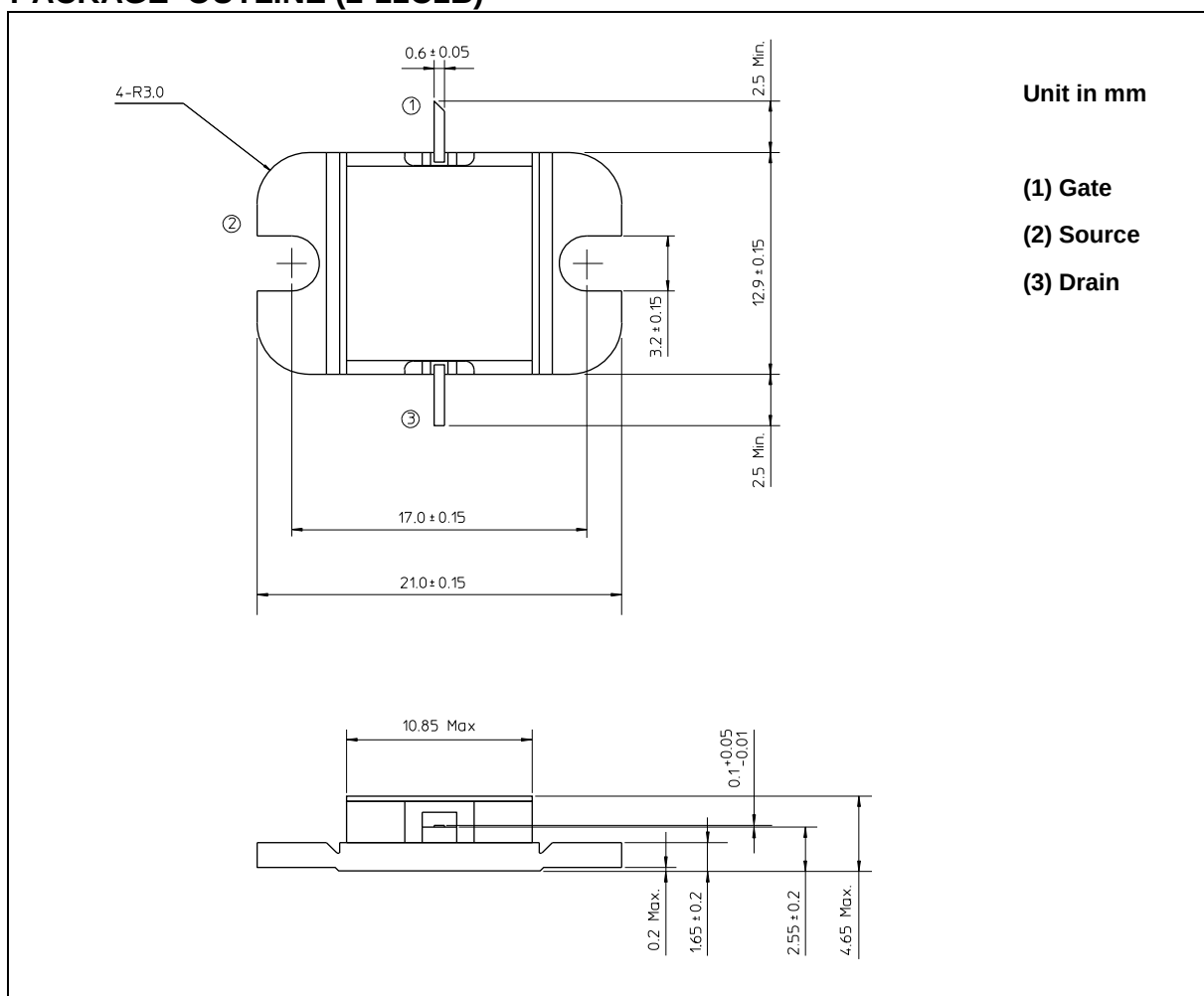
## ELECTRICAL CHARACTERISTICS (Ta= 25°C)

| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 4.0A  | S    | —    | 2.4  | —    |
| 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)**

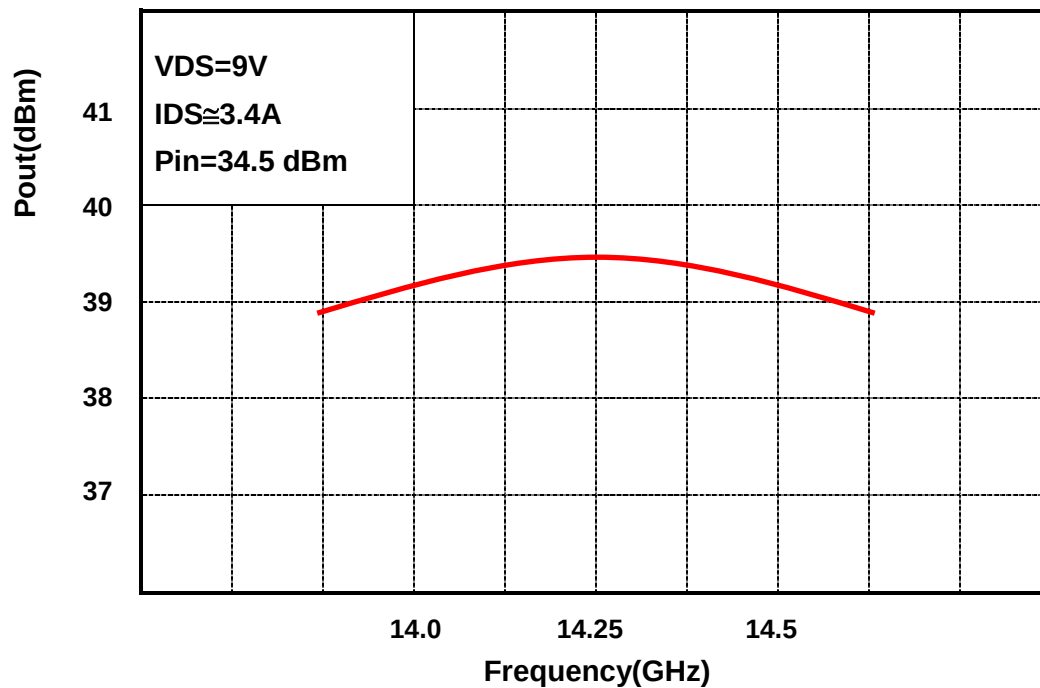
| CHARACTERISTICS                    | SYMBOL | UNIT | RATING      |
|------------------------------------|--------|------|-------------|
| Drain-Source Voltage               | VDS    | V    | 15          |
| Gate-Source Voltage                | VGS    | V    | -5          |
| Drain Current                      | IDS    | A    | 10.4        |
| Total Power Dissipation (Tc= 25°C) | PT     | W    | 60          |
| Channel Temperature                | Tch    | °C   | 175         |
| Storage                            | Tstg   | °C   | -65 to +175 |

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

**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

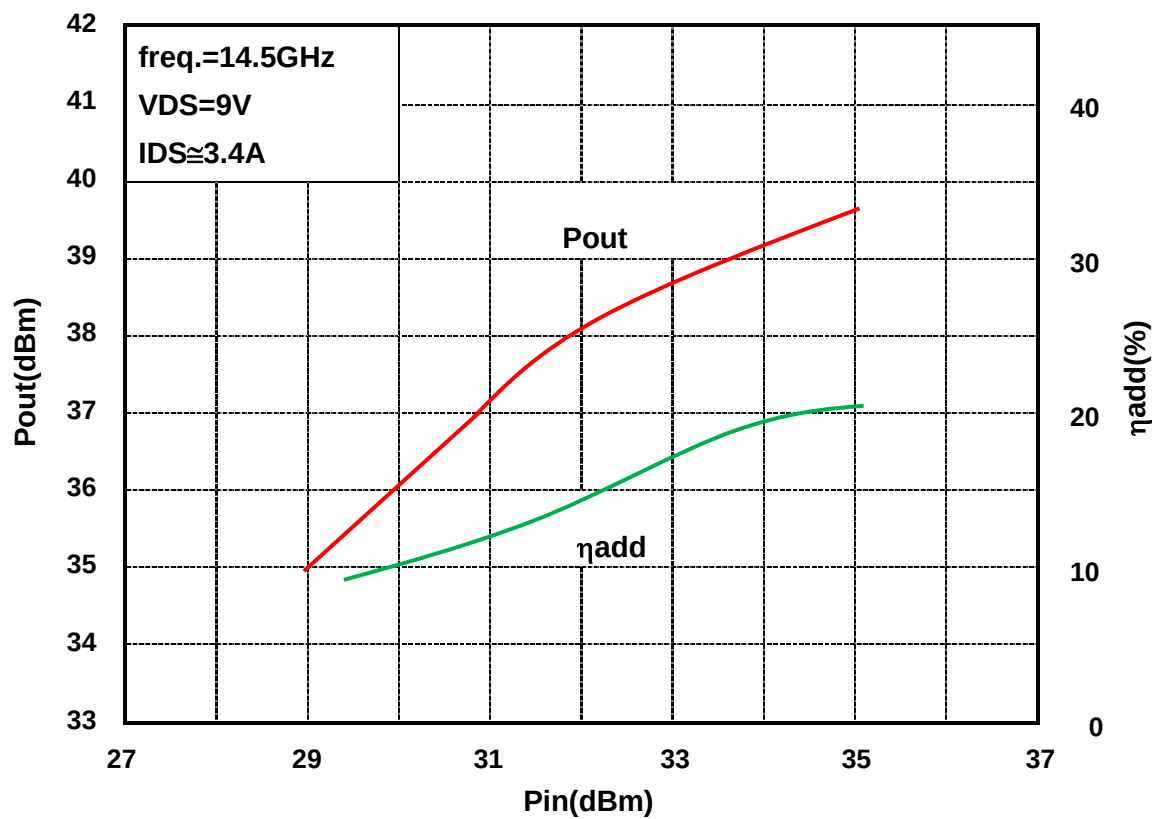
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

**RF PERFORMANCE**

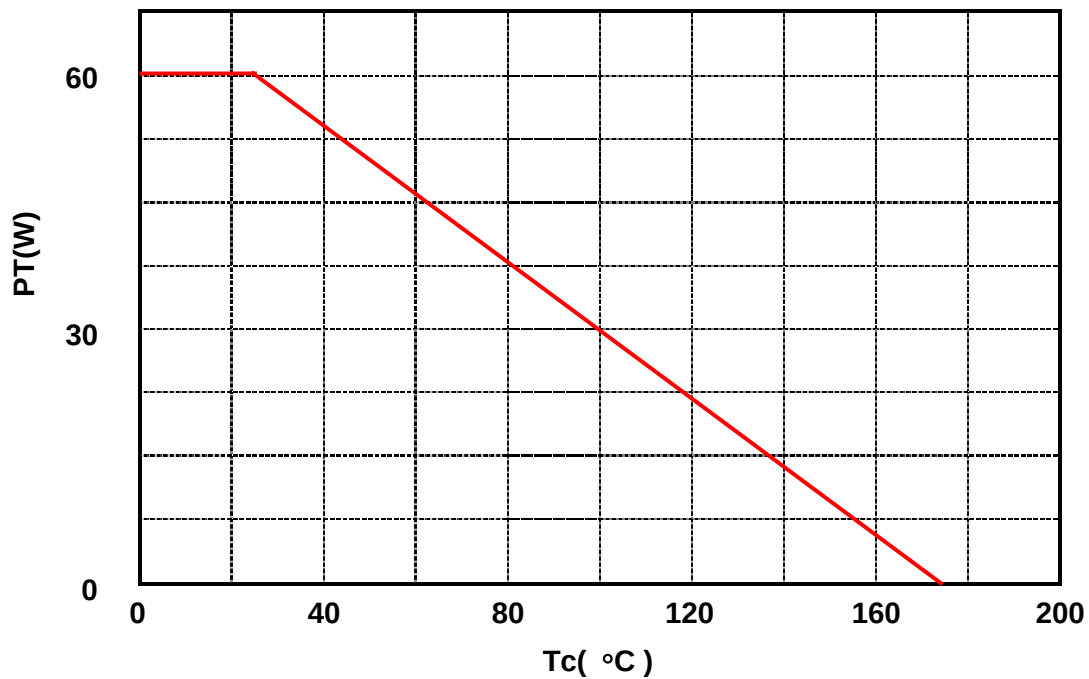
**Output Power (Pout) vs. Frequency**



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



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



**IM3 vs. Output Power Characteristics**

