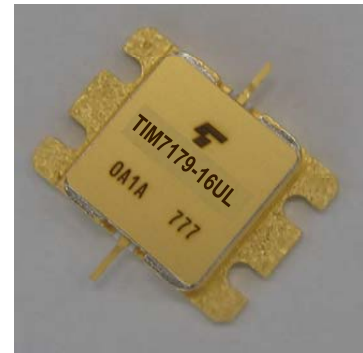


**FEATURES**

- **BROAD BAND INTERNALLY MATCHED FET**
- **HIGH POWER**  
P1dB= 42.5dBm at 7.1GHz to 7.9GHz
- **HIGH GAIN**  
G1dB= 8.5dB at 7.1GHz to 7.9GHz
- **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>IDSset= 3.6A<br>f = 7.1 to 7.9GHz                    | dBm  | 41.5 | 42.5 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB   |  | dB   | 7.5  | 8.5  | —    |
| Drain Current                              | IDS1   |  | A    | —    | 4.4  | 5.0  |
| Gain Flatness                              | ΔG     |  | dB   | —    | —    | ±0.6 |
| Power Added Efficiency                     | ηadd   |  | %    | —    | 35   | —    |
| 3rd Order Intermodulation Distortion       | IM3    | Two Tone Test<br>Po= 31.5dBm, Δf= 5MHz<br>(Single Carrier Level) | dBc  | -44  | -47  | —    |
| Drain Current                              | IDS2   |  | A    | —    | 4.4  | 5.0  |
| Channel Temperature Rise                   | ΔTch   | (VDS X IDS + Pin – P1dB)<br>X Rth(c-c)                           | °C   | —    | —    | 80   |

**Recommended Gate Resistance(Rg): 68 Ω**

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

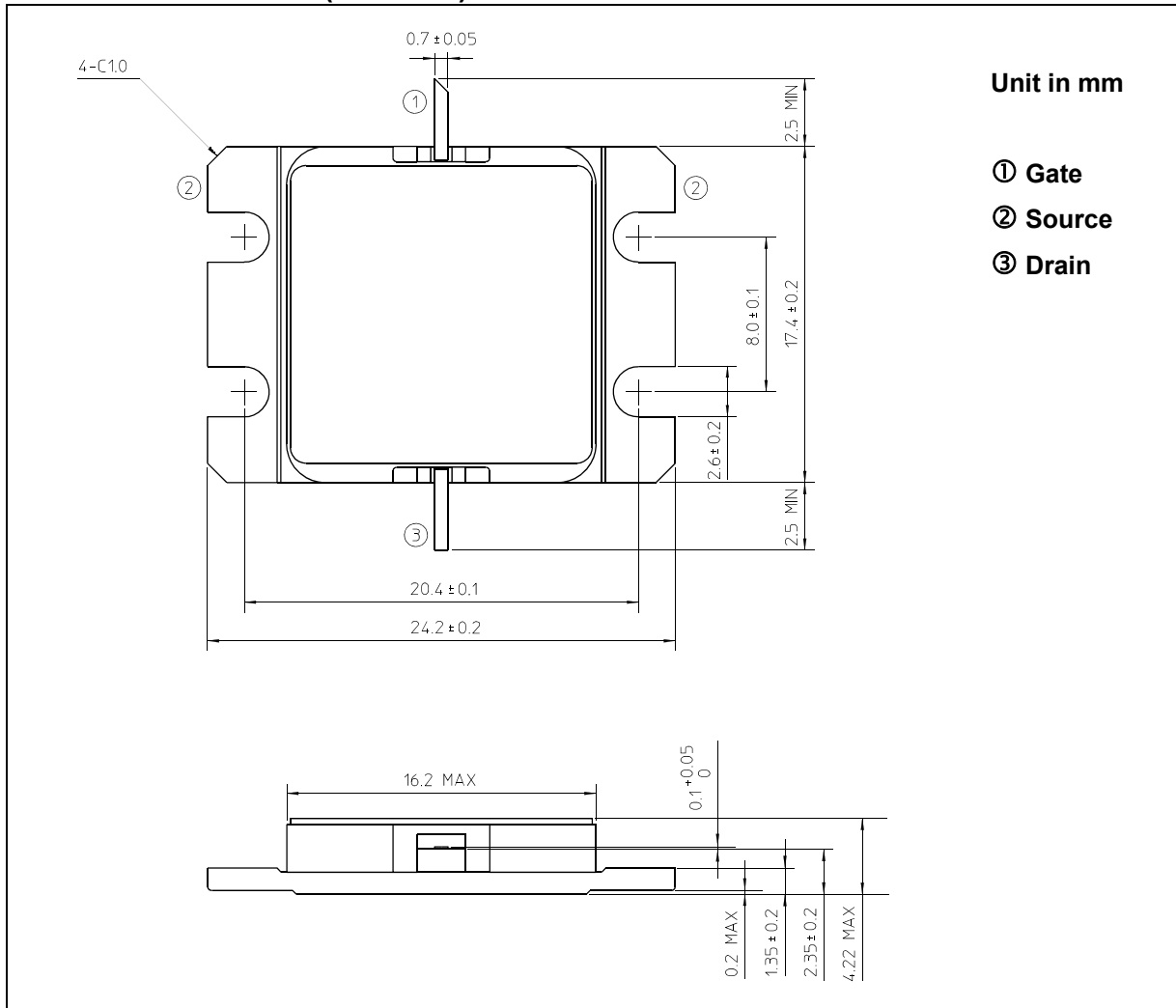
| CHARACTERISTICS               | SYMBOL   | CONDITIONS           | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 6.0A | S    | —    | 3.6  | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 60mA | V    | -1.0 | -2.5 | -4.0 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V   | A    | —    | 10.5 | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -200μA          | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case      | °C/W | —    | 1.5  | 1.8  |

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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    | 14.0        |
| Total Power Dissipation (Tc= 25°C) | PT     | W    | 83.3        |
| Channel Temperature                | Tch    | °C   | 175         |
| Storage Temperature                | Tstg   | °C   | -65 to +175 |

**PACKAGE OUTLINE (2-16G1B)**

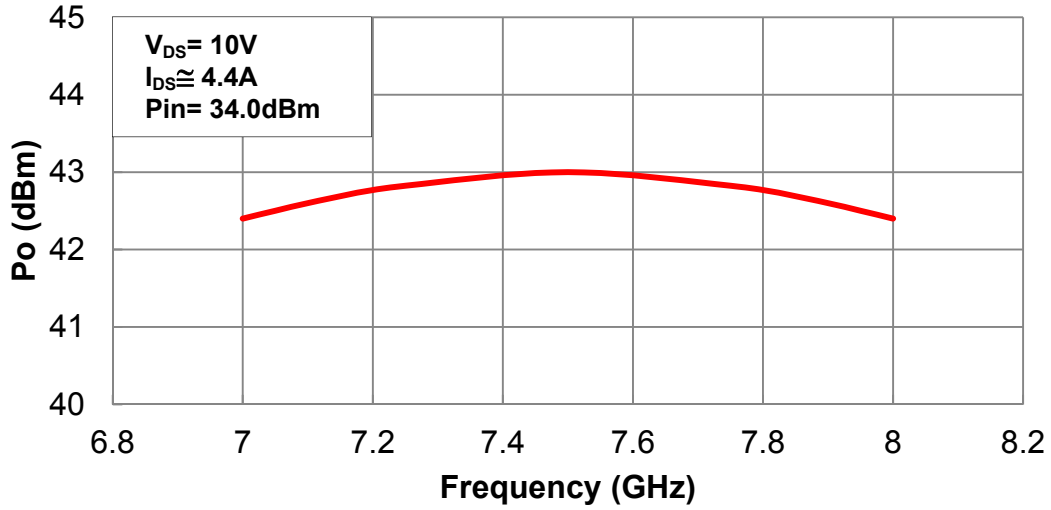


**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

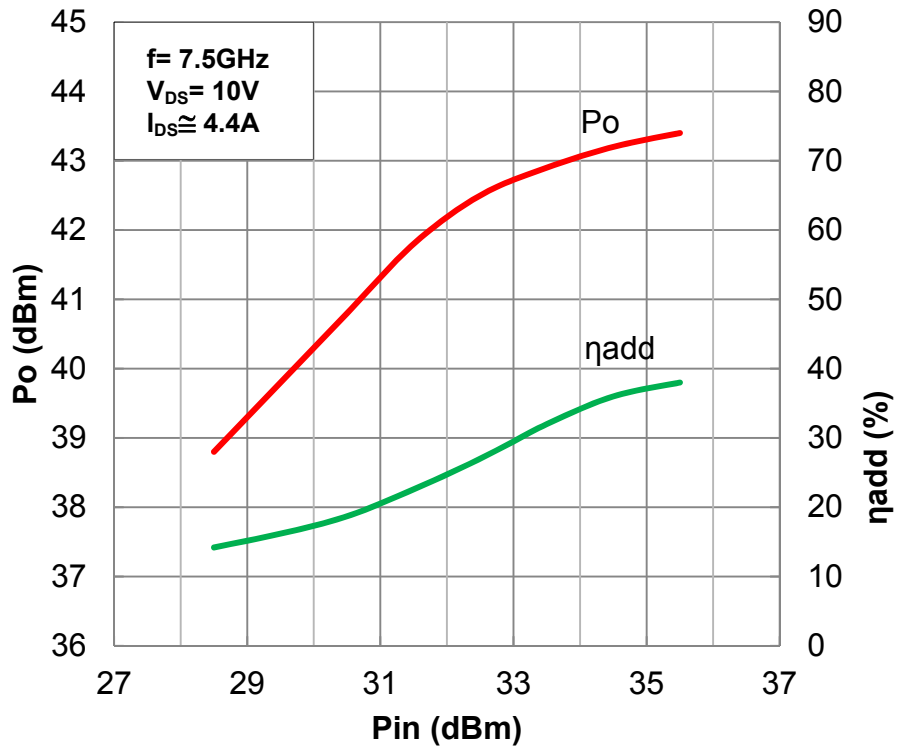
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

**RF PERFORMANCE**

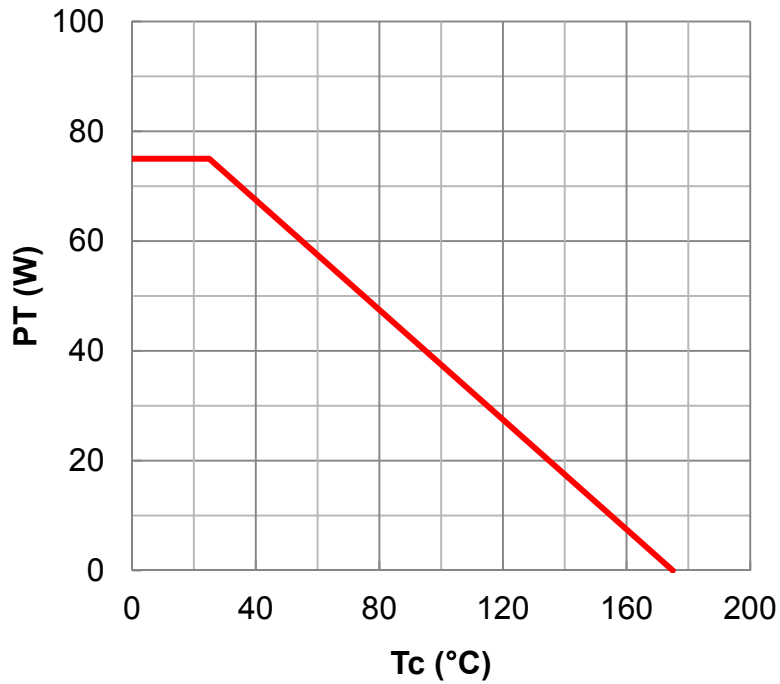
**Output Power vs. Frequency**



**Output Power vs. Input Power**



**Power Dissipation vs. Case Temperature**



**IM3 vs. Output Power Characteristics**

