

**FEATURES**

■ **HIGH POWER**

P1dB=48.0dBm at 2.4GHz

■ **HIGH GAIN**

G1dB=10.0dB at 2.4GHz

■ **PARTIALLY MATCHED TYPE**

■ **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= 12V<br>f = 2.4GHz<br>IDSset≅8.0A | dBm                                    | 47.0 | 48.0 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB   |                                       | dB                                     | 9.0  | 10.0 | —    |
| Drain Current                              | IDS1   |                                       | A                                      | —    | 12.0 | 15.0 |
| Power Added Efficiency                     | ηadd   |                                       | %                                      | —    | 39   | —    |
| Channel Temperature Rise                   | ΔTch   |                                       | (VDS X IDS + Pin - P1dB)<br>X Rth(c-c) | °C   | —    | —    |

Recommended gate resistance (Rg) : Rg = 30 Ω (Max.)

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

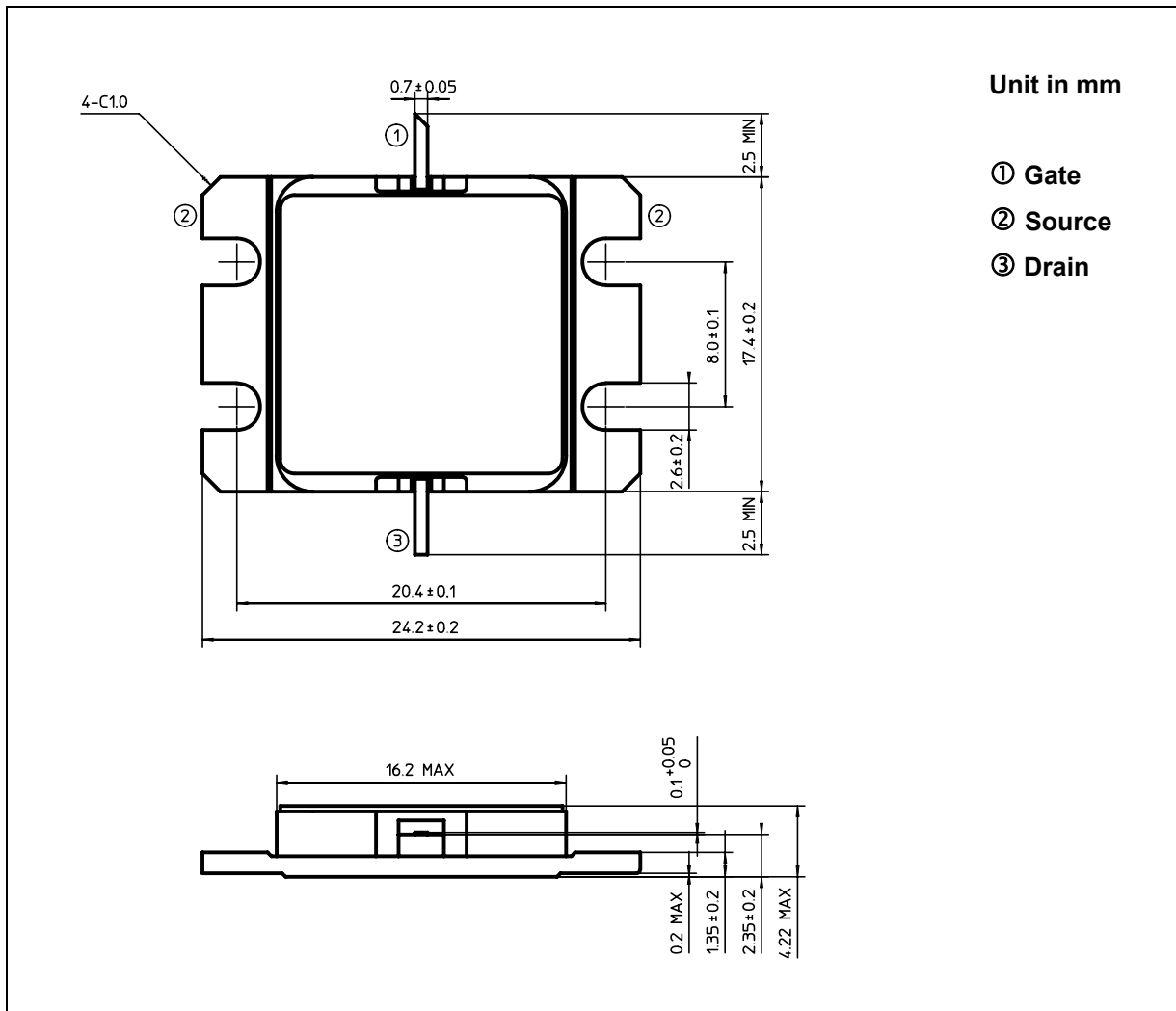
| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 12.0A | S    | —    | 20.0 | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 300mA | V    | -1.0 | -1.8 | -3.0 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V    | A    | —    | 38   | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -10.0mA          | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case       | °C/W | —    | 0.6  | 0.8  |

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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    | 26.0       |
| Total Power Dissipation (Tc= 25 °C ) | PT     | W    | 187.5      |
| Channel Temperature                  | Tch    | °C   | 175        |
| Storage                              | Tstg   | °C   | -65 ~ +175 |

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

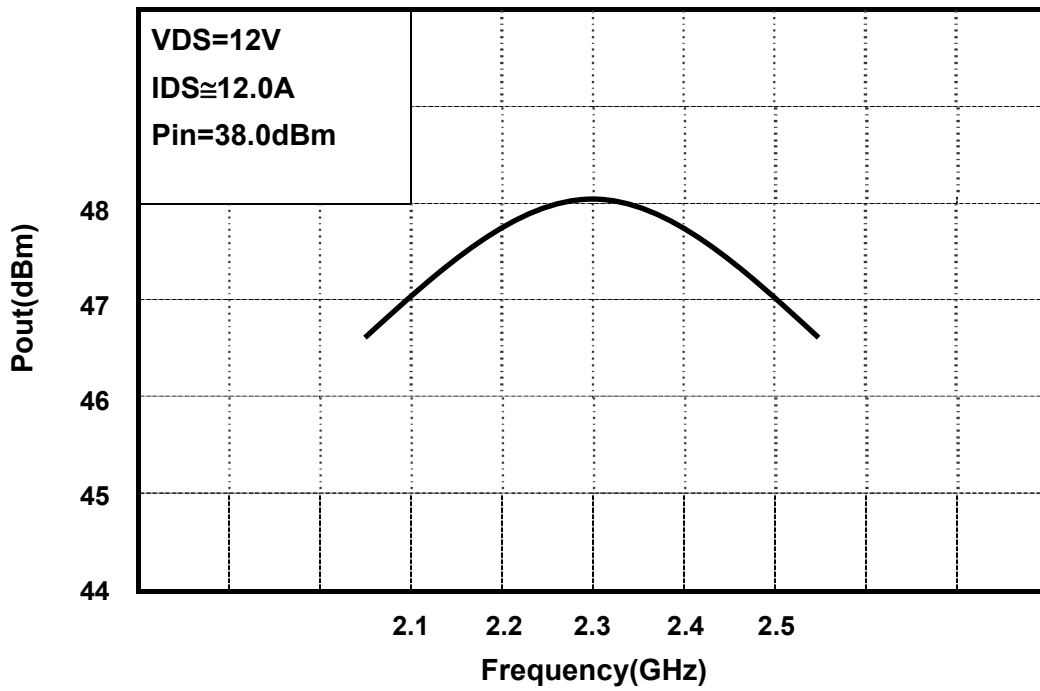


**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

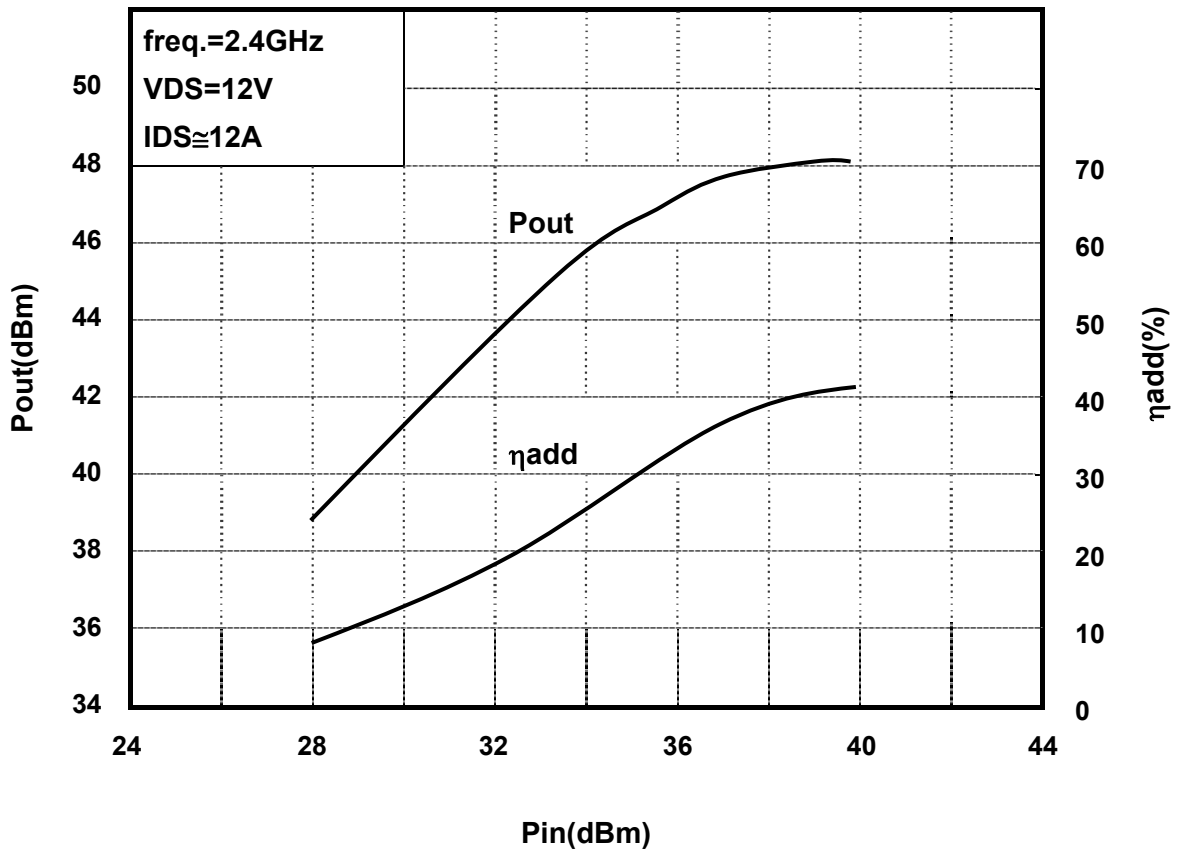
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

## RF PERFORMANCE

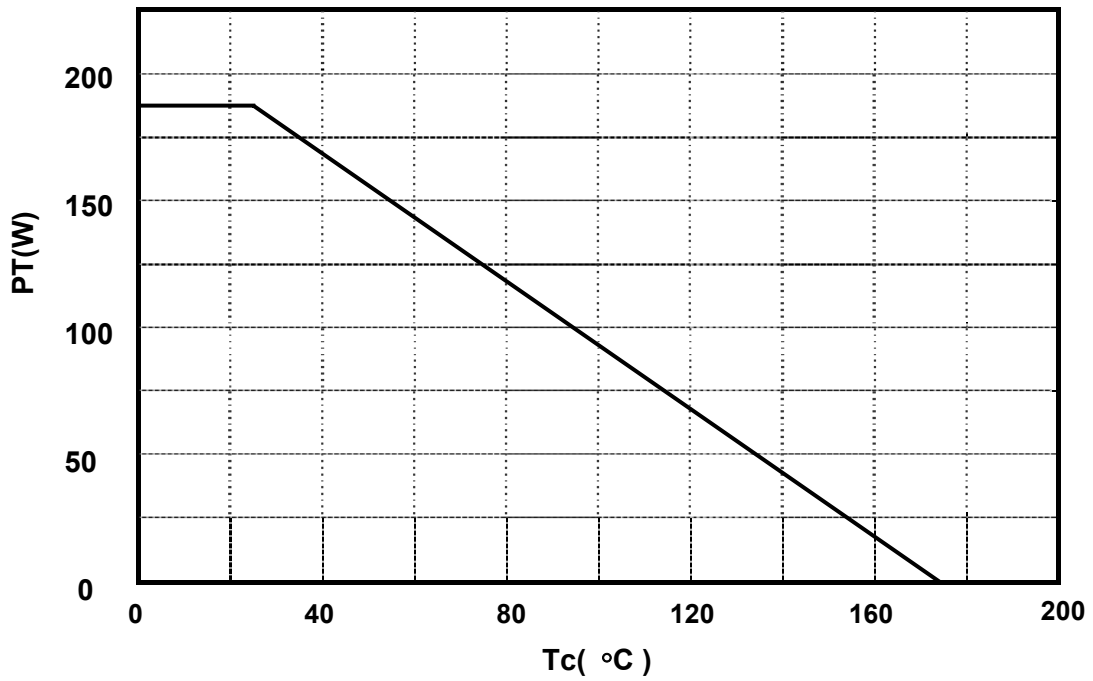
Output Power (Pout) vs. Frequency



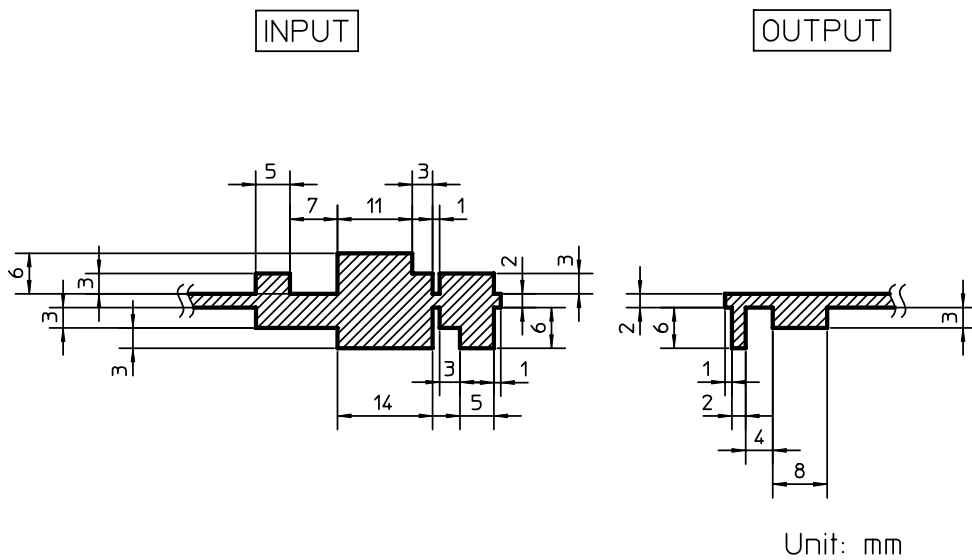
Output Power(Pout) vs. Input Power(Pin)



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



**DRAWING OF RECOMMENDABLE MATCHING NETWORK**



Substrate Material: Teflon ( $\epsilon_r=2.8$ )  
 Thickness: 0.76mm