

FEATURES

- **BROAD BAND INTERNALLY MATCHED FET**
- **HIGH POWER**
P1dB= 48.0dBm at 5.9GHz to 6.4GHz
- **HIGH GAIN**
G1dB= 8.5dB at 5.9GHz to 6.4GHz
- **LOW INTERMODULATION DISTORTION**
IM3= -45dBc at Pout= 36.5dBm
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= 10V IDSset= 9.5A f = 5.9 to 6.4GHz | dBm | 47.0 | 48.0 | — |
| Power Gain at 1dB Gain Compression Point | G1dB | | dB | 7.5 | 8.5 | — |
| Drain Current | IDS1 | | A | — | 13.2 | 15.0 |
| Gain Flatness | ΔG | | dB | — | — | ±0.8 |
| Power Added Efficiency | ηadd | | % | — | 41 | — |
| 3rd Order Intermodulation Distortion | IM3 | Two Tone Test Po= 36.5dBm, Δf= 5MHz (Single Carrier Level) | dBc | -42 | -45 | — |
| Drain Current | IDS2 | | A | — | — | 11.8 |
| Channel Temperature Rise | ΔTch | (VDS X IDS + Pin – P1dB) X Rth(c-c) | °C | — | — | 100 |

Recommended Gate Resistance(Rg): 28 Ω

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

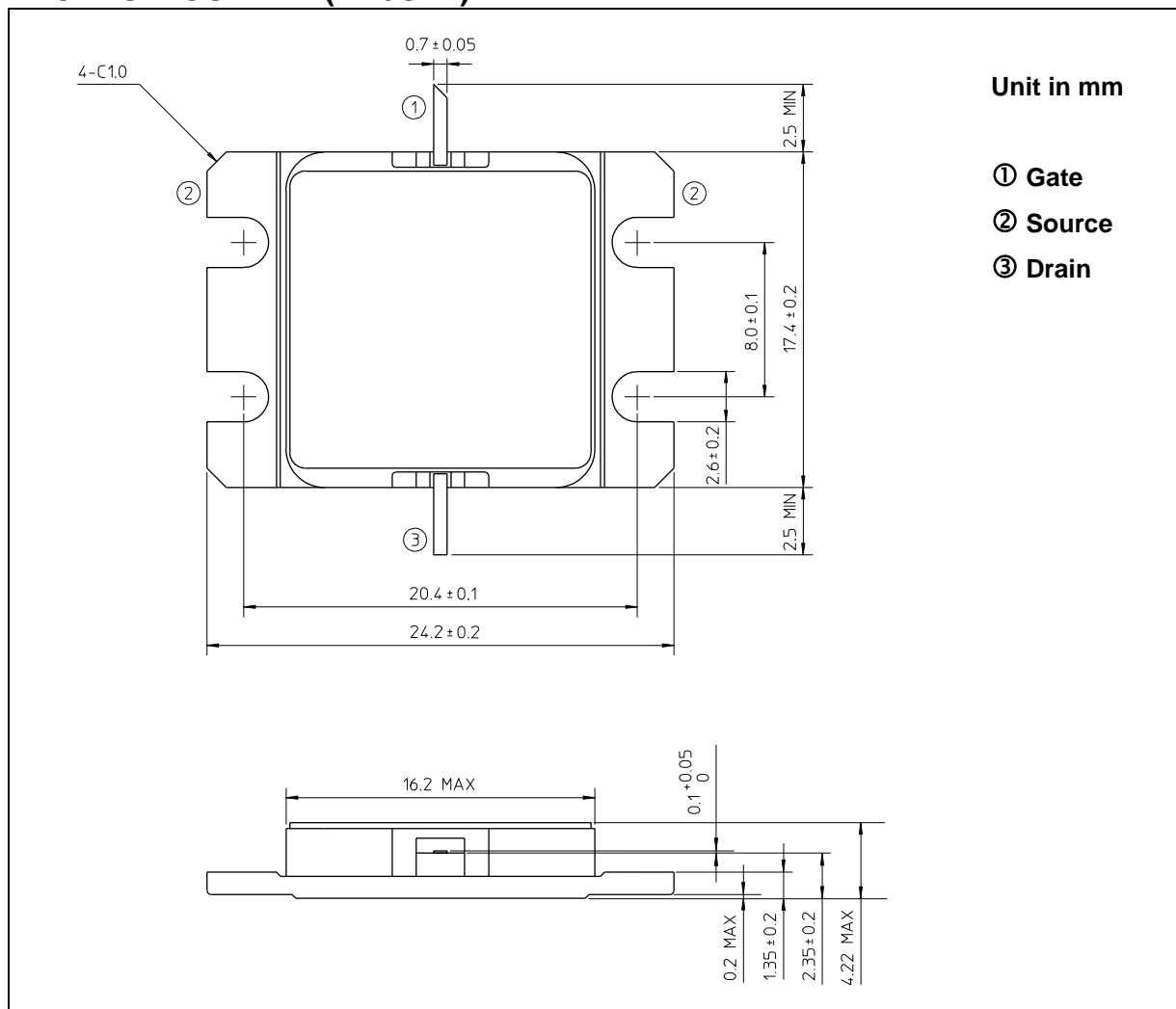
| CHARACTERISTICS | SYMBOL | CONDITIONS | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance | gm | VDS= 3V IDS= 12.0A | S | — | 20 | — |
| Pinch-off Voltage | VGSoff | VDS= 3V IDS= 200mA | V | -1.0 | -1.8 | -3.0 |
| Saturated Drain Current | IDSS | VDS= 3V VGS= 0V | A | — | 38 | — |
| Gate-Source Breakdown Voltage | VGSO | IGS= -1.0mA | 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 | 20 |
| Total Power Dissipation (Tc= 25°C) | PT | W | 187.5 |
| Channel Temperature | Tch | °C | 175 |
| Storage Temperature | Tstg | °C | -65 to +175 |

PACKAGE OUTLINE (2-16G1B)

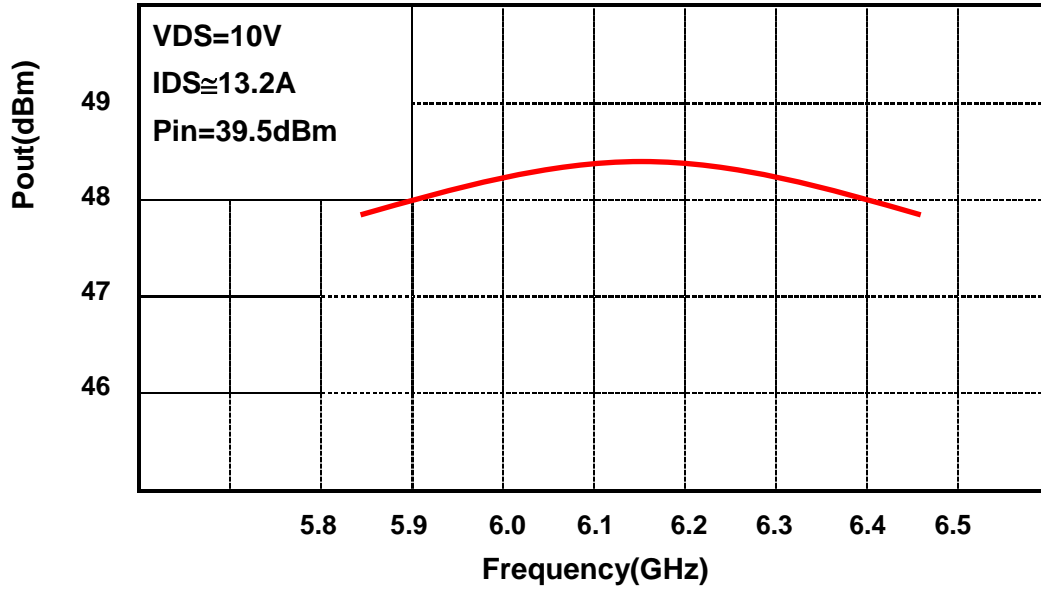


HANDLING PRECAUTIONS FOR PACKAGE MODEL

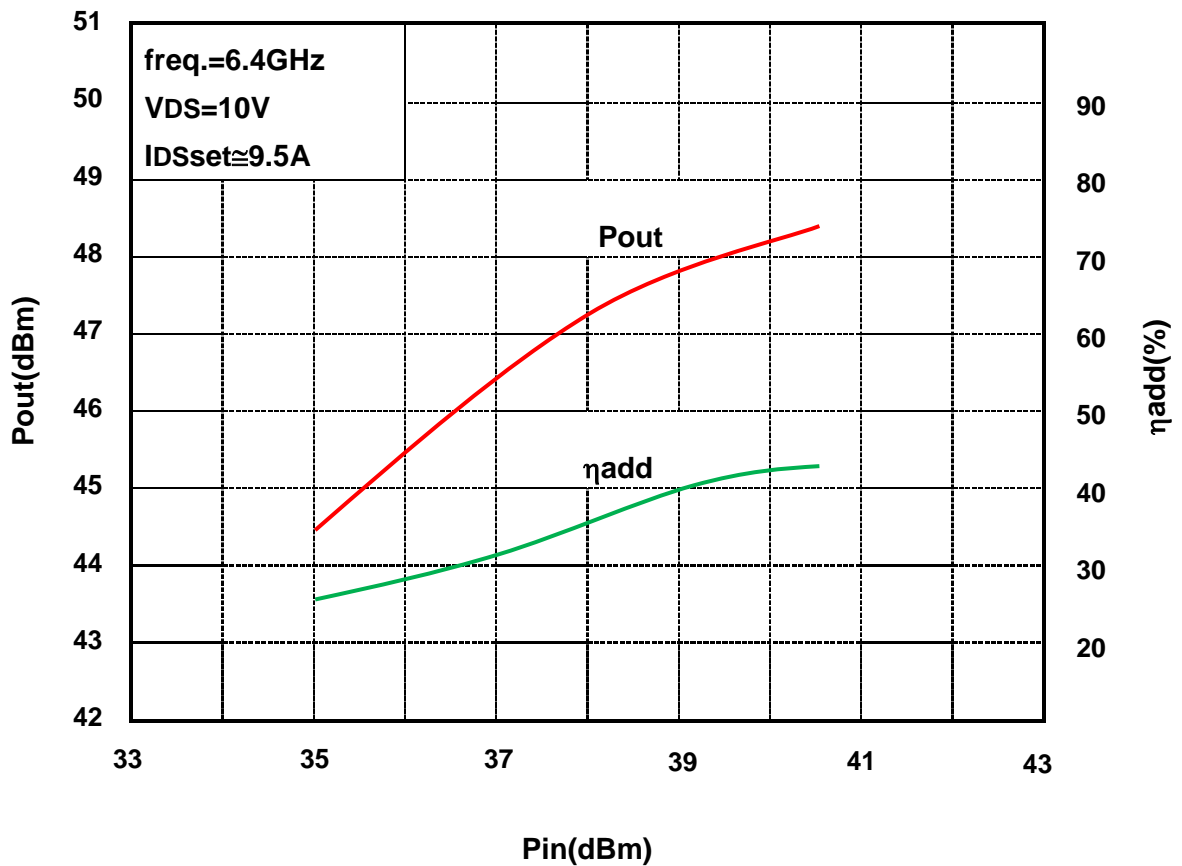
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

RF PERFORMANCE

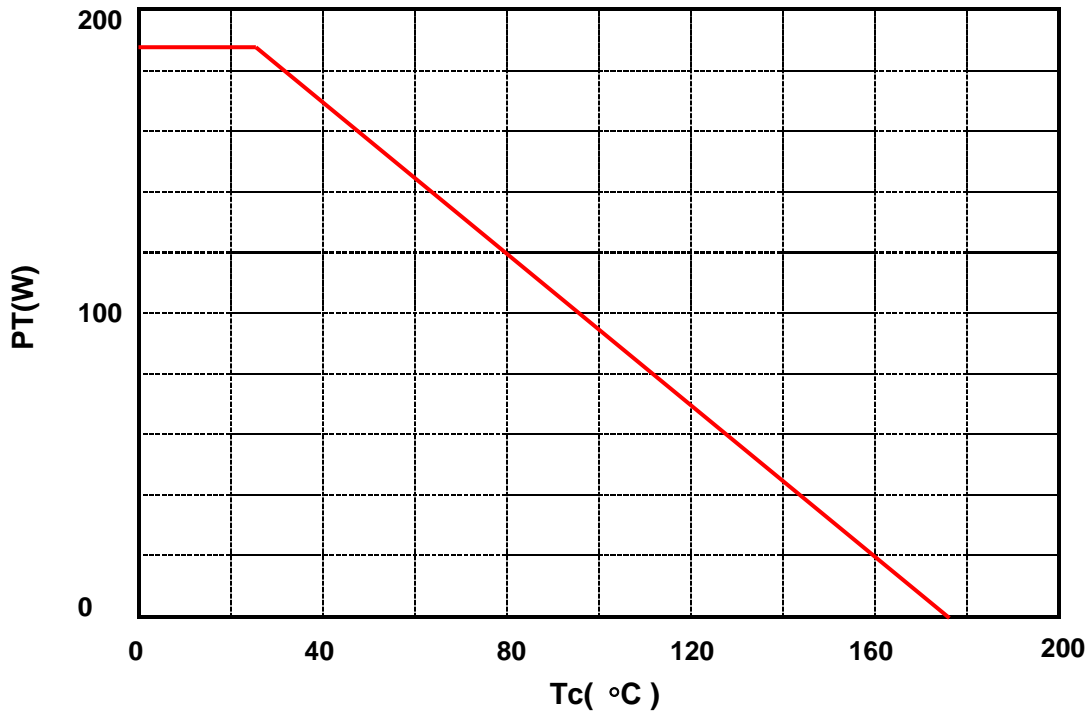
Output Power (Pout) vs. Frequency



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



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



IM3 vs. Power Characteristics

