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ELECTRONICS

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Jameco Part Number 2071697

FEATURES

n LOW INTERMODULATION DISTORTION

IM3=-45 dBc at Po= 35.0dBm,
 Single Carrier Level

n HIGH POWER

P1dB=45.5dBm at 5.9GHz to 6.4GHz

n HIGH GAIN

G1dB=9.0dB at 5.9GHz to 6.4GHz

n BROAD BAND INTERNALLY MATCHED FET

n 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 f = 5.9 to 6.4GHz | dBm | 45.0 | 45.5 | — |
| Power Gain at 1dB Gain Compression Point | G1dB | | dB | 8.0 | 9.0 | — |
| Drain Current | IDS1 | | A | — | 8.0 | 9.0 |
| Gain Flatness | ΔG | | dB | — | — | ±0.8 |
| Power Added Efficiency | ηadd | | % | — | 39 | — |
| 3rd Order Intermodulation Distortion | IM3 | Two-Tone Test Po=35.0dBm | dBc | -42 | -45 | — |
| Drain Current | IDS2 | (Single Carrier Level) | A | — | 8.0 | 9.0 |
| Channel Temperature Rise | ΔTch | (VDS X IDS + Pin - P1dB) X Rth(c-c) | °C | — | — | 100 |

Recommended gate resistance(Rg) : Rg= 28 Ω(MAX.)

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

| CHARACTERISTICS | SYMBOL | CONDITIONS | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance | gm | VDS= 3V IDS= 10.5A | mS | — | 6500 | — |
| Pinch-off Voltage | VGSoff | VDS= 3V IDS= 140mA | V | -1.0 | -2.5 | -4.0 |
| Saturated Drain Current | IDSS | VDS= 3V VGS= 0V | A | — | 20 | — |
| Gate-Source Breakdown Voltage | VGSO | IGS= -420μA | V | -5 | — | — |
| Thermal Resistance | Rth(c-c) | Channel to Case | °C/W | — | 1.0 | 1.3 |

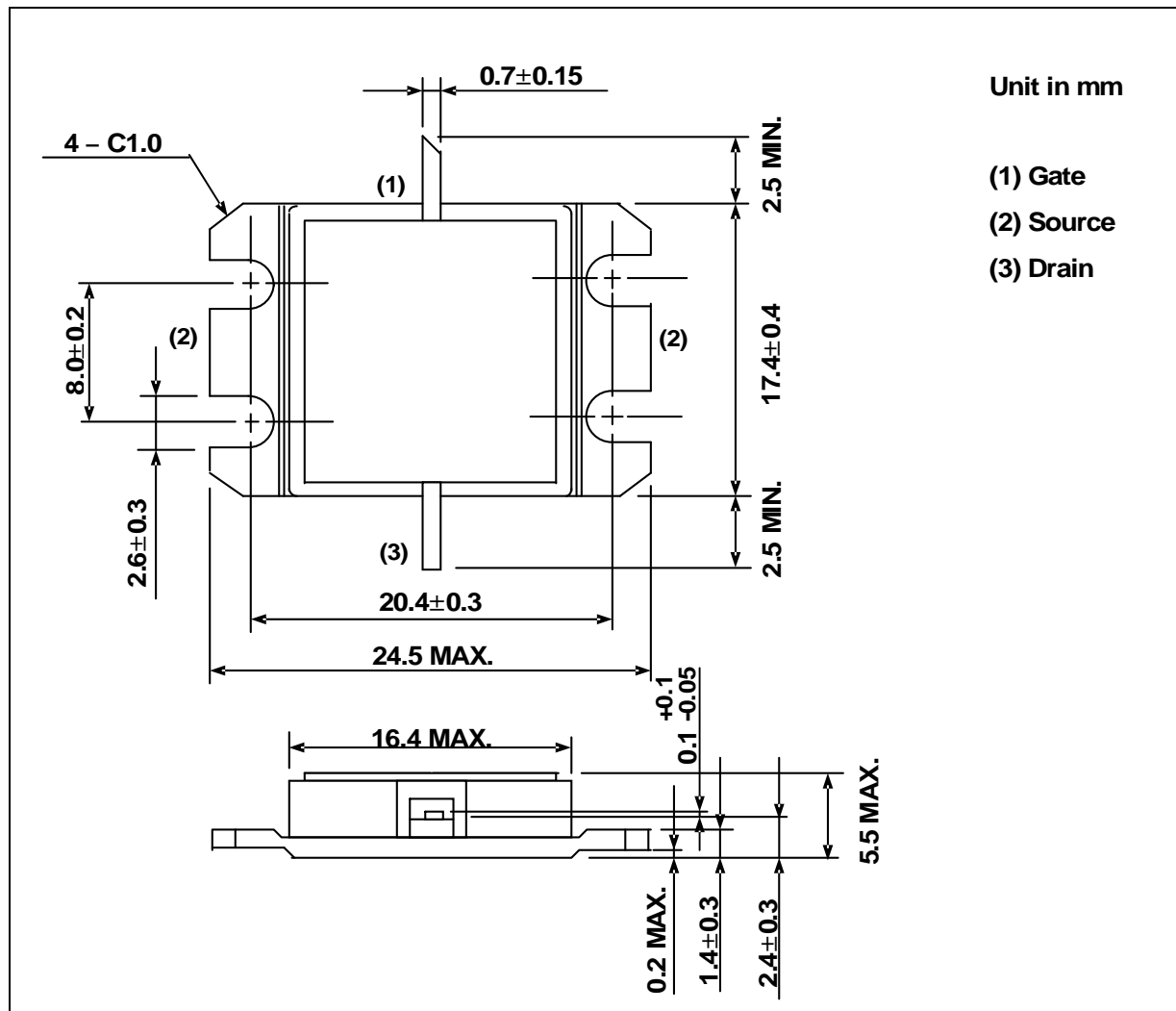
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ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

| 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 | 115.4 |
| Channel Temperature | Tch | °C | 175 |
| Storage | Tstg | °C | -65 to +175 |

PACKAGE OUTLINE (2-16G1B)

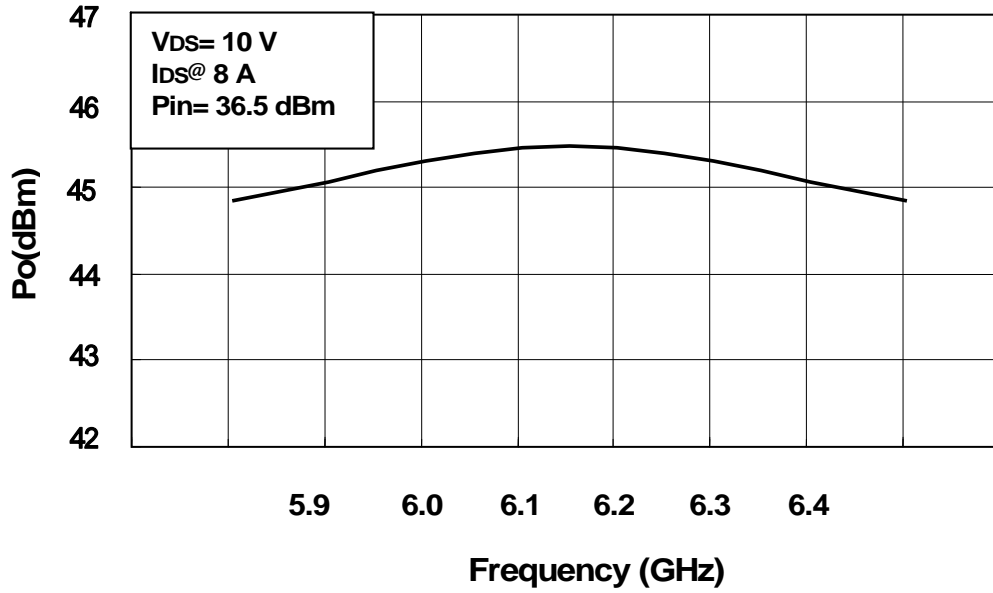


HANDLING PRECAUTIONS FOR PACKAGE MODEL

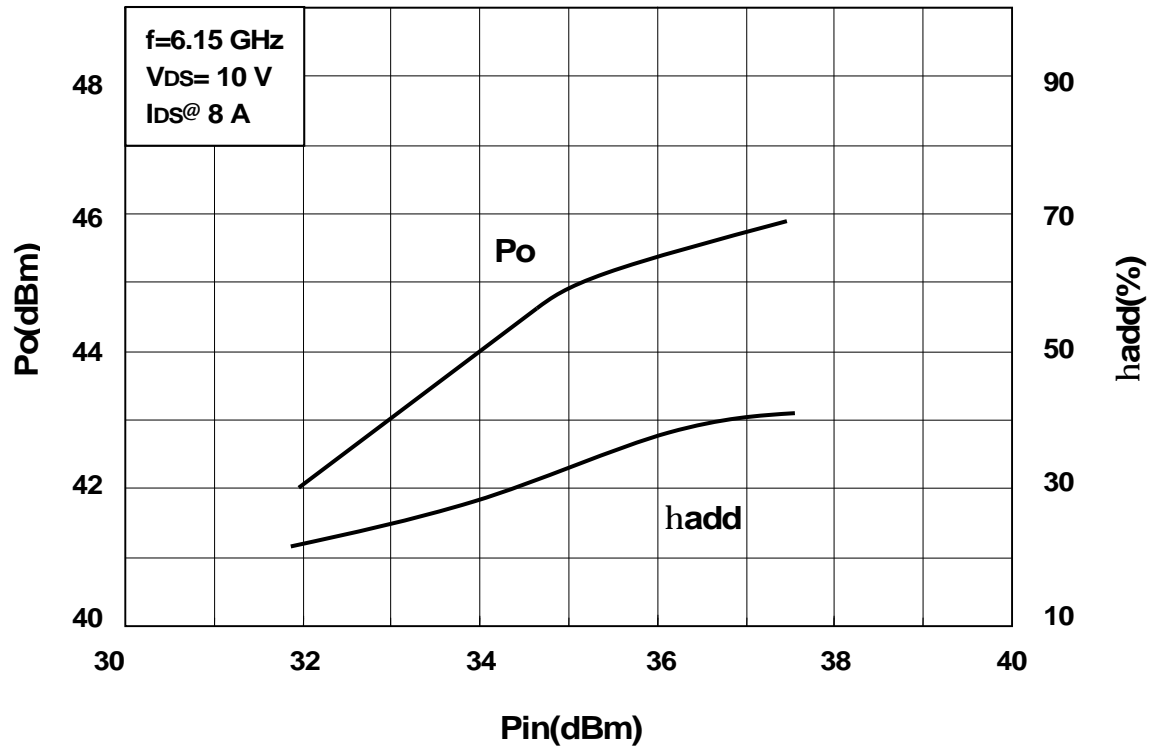
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCE

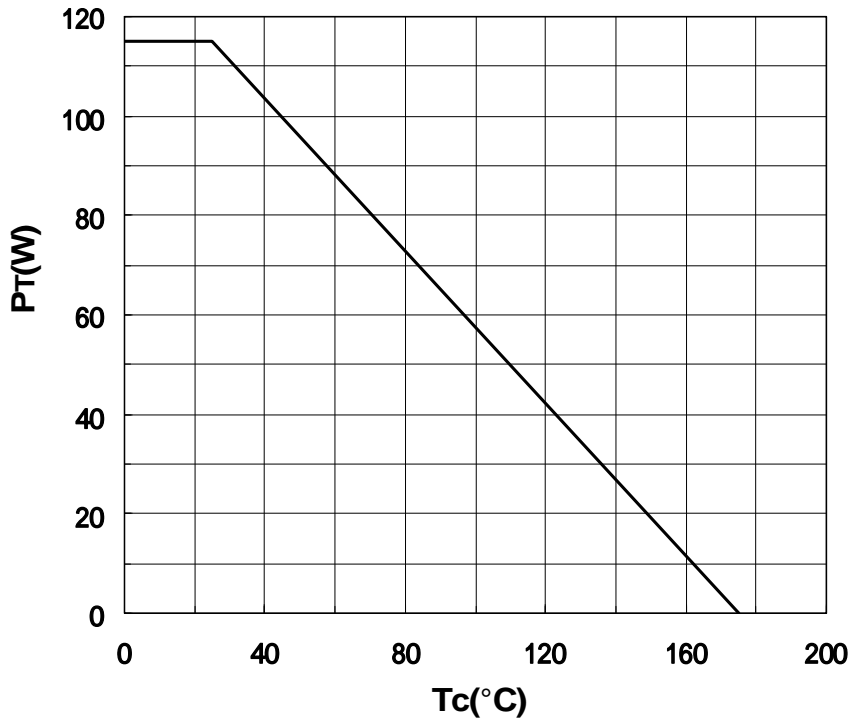
Output Power vs. Frequency



Output Power vs. Input Power



Power Dissipation vs. Case Temperature



IM3 vs. Output Power Characteristics

