

FEATURES:

- LOW INTERMODULATION DISTORTION
IM₃ = -45 dBc at P_o 35.0 dBm
- HIGH POWER
P_{1dB} = 45.5 dBm at 6.4 to 7.2 GHz
- HIGH EFFICIENCY
 η_{add} = 37% at 6.4 to 7.2 GHz
- HIGH GAIN
G_{1dB} = 8.0dB at 6.4 to 7.2 GHz
- BROAD BAND INTERNALLY MATCHED
- HERMETICALLY SEALED PACKAGE

RF PERFORMANCE SPECIFICATIONS (Ta = 25°C)

| CHARACTERISTICS | SYMBOL | CONDITION | UNIT | MIN. | TYP. | MAX. |
|--|------------------|--|------|------|------|-----------|
| Output Power at 1 dB Compression Point | P _{1dB} | V _{DS} = 10V f = 6.4~7.2GHz | dBm | 45.0 | 45.5 | - |
| Power Gain at 1 dB Compression Point | G _{1dB} | | dB | 7.0 | 8.0 | - |
| Drain Current | I _{DS} | | A | - | 8.0 | 9.0 |
| Gain Flatness | ΔG | | dB | - | - | ± 0.8 |
| Power Added Efficiency | η_{add} | | % | - | 37 | - |
| 3rd Order Intermodulation Distortion | IM ₃ | Note 1 | dBc | -42 | -45 | - |
| Channel Temperature Rise | ΔT_{ch} | V _{DS} × I _{DS} × R _{th(c-c)} | °C | - | - | 100 |

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTICS | SYMBOL | CONDITION | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------------------|---|------|------|------|------|
| Trans-conductance | gm | V _{DS} = 3V I _{DS} = 10.5A | mS | - | 6500 | - |
| Pinch-off Voltage | V _{GSoff} | V _{DS} = 3V I _{DS} = 140mA | V | -1.0 | -2.5 | -4.0 |
| Saturated Drain Current | I _{DSS} | V _{DS} = 3V V _{GS} = 0V | A | - | 20 | 26 |
| Gate-Source Breakdown Voltage | V _{GS0} | I _{GS} = -420 μ A | V | -5 | - | - |
| Thermal Resistance | R _{th(c-c)} | Channel to Case | °C/W | - | 1.0 | 1.3 |

Note 1: 2 tone Test Pout = 35dBm Single Carrier Level.
Recommended Gate Resistance(R_g) : R_g = R_{g1}(10 Ω) + R_{g2}(18 Ω) = 28 Ω (MAX.)

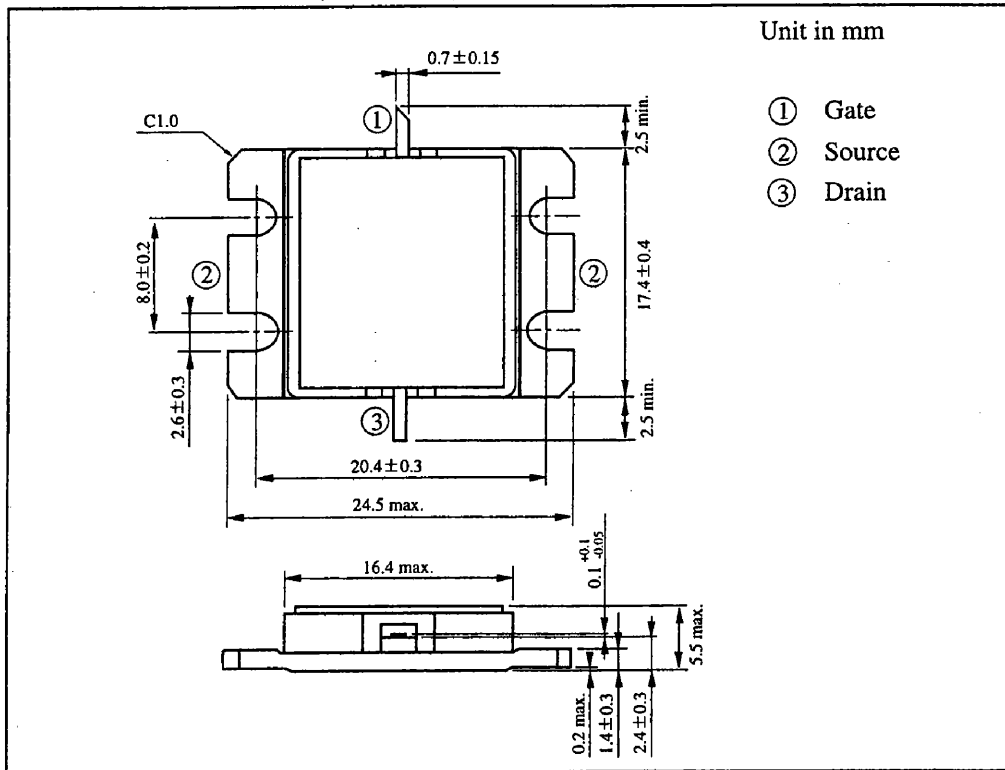
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TIM6472-35SL

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTICS | SYMBOL | UNIT | RATING |
|--------------------------------------|------------------|------|---------|
| Drain-Source Voltage | V _{DS} | V | 15 |
| Gate-Source Voltage | V _{GS} | V | -5 |
| Drain Current | I _{DS} | A | 26 |
| Total Power Dissipation (Tc=25°C) | P _T | W | 115 |
| Channel Temperature | T _{ch} | °C | 175 |
| Storage Temperature | T _{stg} | °C | -65~175 |

PACKAGE OUTLINE (2-16G1B)

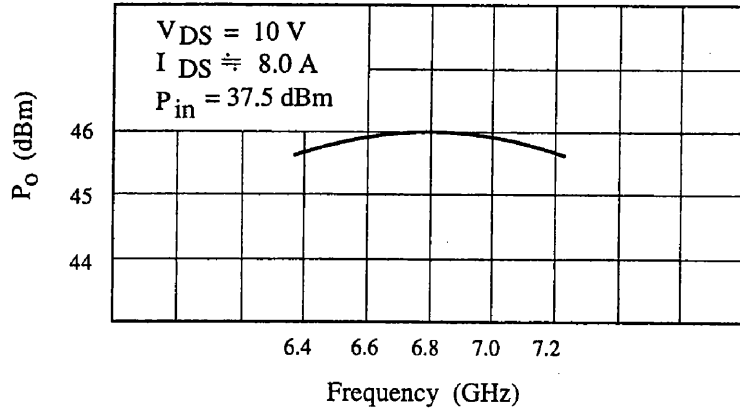


HANDLING PRECAUTIONS FOR PACKAGED TYPE

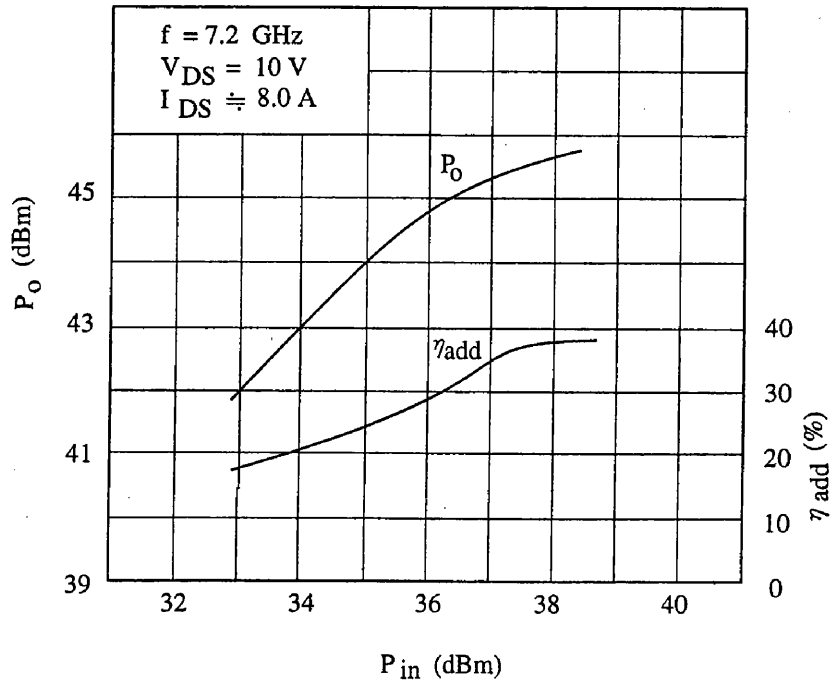
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCES

Output Power vs. Frequency

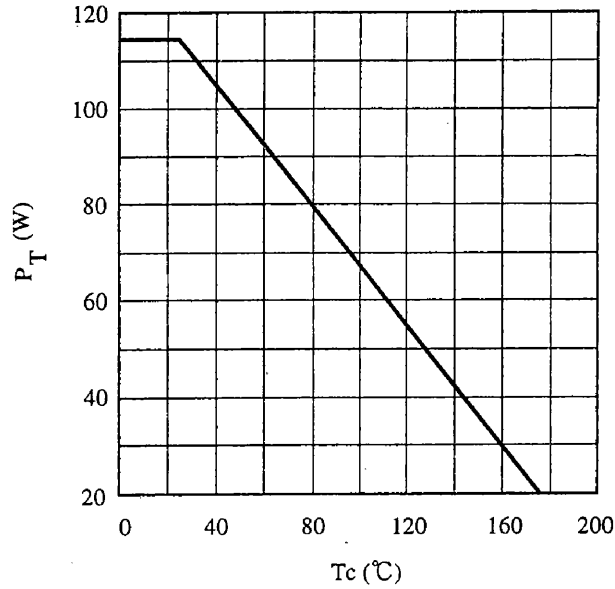


Output Power vs. Input Power



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POWER DISSIPATION VS. CASE TEMPERATURE



IM₃ VS. OUTPUT POWER CHARACTERISTICS

