

TOSHIBA**MICROWAVE SEMICONDUCTOR
TECHNICAL DATA****MICROWAVE POWER GaAs FET****TIM1414-8-252****RF PERFORMANCE SPECIFICATIONS (Ta=25°C)**

| CHARACTERISTICS | SYMBOL | CONDITION | UNIT | MIN. | TYP. | MAX. |
|---|--------------|-----------------------------|------|------|------|------|
| Output Power at 1dB Gain Compression Point | P1dB | VDD=9V f = 13.75-14.5GHz | dBm | 38.0 | 39.0 | — |
| Power Gain at 1dB Gain Compression Point | G1dB | | dB | 4.0 | 5.0 | — |
| Drain Current | Ids1 | | A | — | 3.4 | 4.4 |
| Power Added Efficiency | η_{add} | | % | — | 18 | — |

DataShee

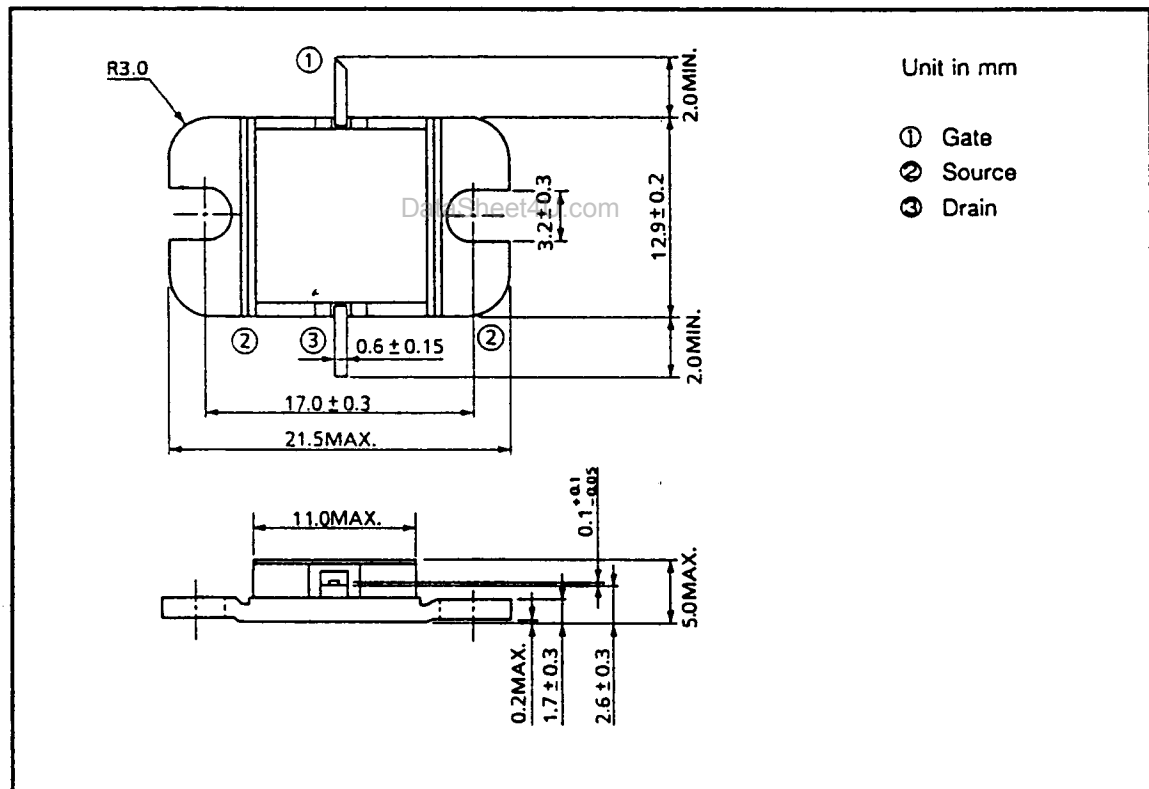
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ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTICS | SYMBOL | CONDITION | UNIT | MIN. | TYP. | MAX. |
|----------------------------------|-----------|---------------------|------|------|------|------|
| DRAIN SUPPLY VOLTAGE | gm | Vds=3V Ids=4.0A | mS | — | 2400 | — |
| Pinch-off Voltage | Vgsoff | Vds=3V Ids=120mA | V | -2.0 | -3.5 | -5.0 |
| Saturated Drain Current | Idss | Vds=3V Vgs=0V | A | — | 8.0 | 10.4 |
| Gate-Source Breakdown Voltage | Vgso | IGS= -120 μ A | V | -5 | — | — |
| Thermal Resistance | Rth (c-c) | Channel to case | °C/W | — | 1.6 | 2.5 |

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

| CHARACTERISTIC | SYMBOL | UNIT | RATING |
|---|-----------|------------------|---------|
| Drain-Source Voltage | V_{DS} | V | 15 |
| Gate-Source Voltage | V_{GS} | V | -5 |
| Drain Current | I_{DS} | A | 10.4 |
| Total Power Dissipation ($T_c = 25^\circ\text{C}$) | P_T | W | 60 |
| Channel Temperature | T_{ch} | $^\circ\text{C}$ | 175 |
| Storage Temperature | T_{stg} | $^\circ\text{C}$ | -65-175 |

PACKAGE OUTLINE (2-11C1B)**HANDLING PRECAUTIONS FOR PACKAGED TYPE**

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