**TOSHIBA**

*MICROWAVE SEMICONDUCTOR*

*TECHNICAL DATA*

**MICROWAVE POWER MMIC AMPLIFIER**

# TMD1414-2C

## FEATURES

n **HIGH POWER**
P1dB=34.5dBm at 13.75GHz to 14.5GHz

n **HIGH GAIN**
G1dB=26.0dB at 13.75GHz to 14.5GHz

n **BROAD BAND INTERNALLY MATCHED**

n **HERMETICALLY SEALED PACKAGE**

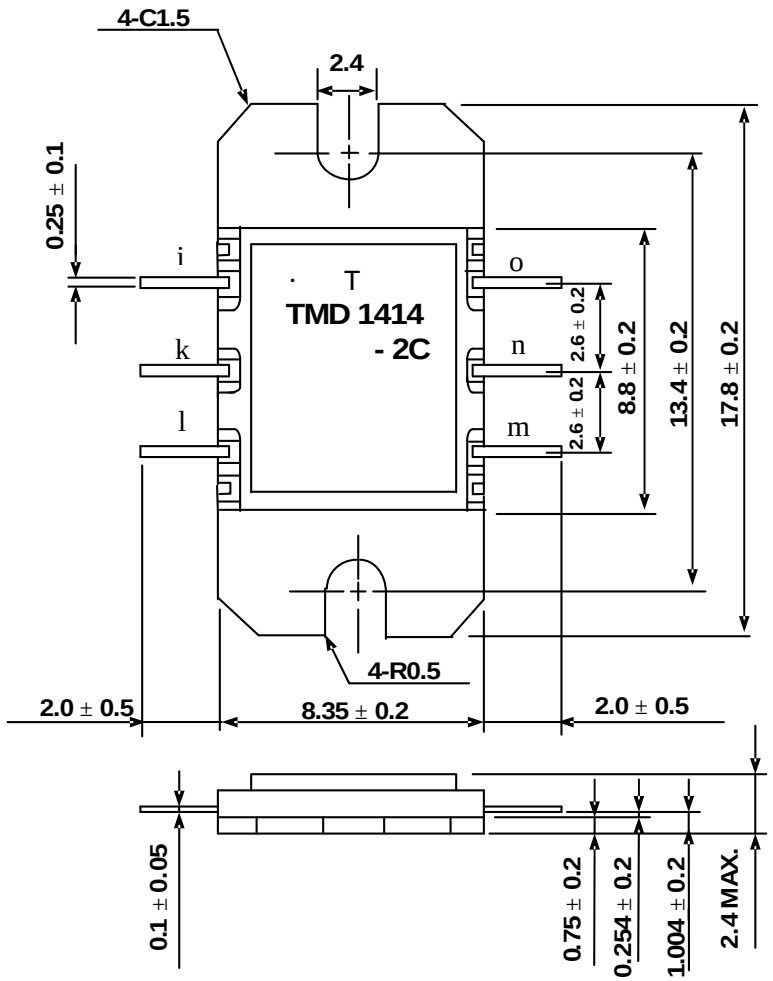
## ABSOLUTE MAXIMUM RATINGS ( Ta= 25°C )

| CHARACTERISTICS | SYMBOL | UNIT | RATING |
|---|---|---|---|
| Drain Supply Voltage | VDD | V | 10 |
| Gate Supply Voltage | VGG | V | -10 |
| Input Power | Pin | dBm | 20 |
| Flange Temperature | Tf | °C | -40 ~ +90 |
| Storage Temperature | Tstg | °C | -65 ~ +175 |

## RF PERFORMANCE SPECIFICATIONS ( Ta= 25°C )

| CHARACTERISTICS | SYMBOL | CONDITIONS | UNIT | MIN. | TYP. | MAX. |
|---|---|---|---|---|---|---|
| Operating Frequency | f | | GHz | 13.75 | — | 14.5 |
| Output Power at 1dB Gain Compression Point | P1dB | VDD=7V<br>VGG=-5V | dBm | 32.0 | 34.5 | — |
| 1dB Gain Compression Point | G1dB | | dB | 21.0 | 26.0 | — |
| Gain Flatness | ΔG | | dB | — | — | ±1.0 |
| Drain Current | IDD | | A | — | 1.4 | 1.8 |
| Power Added Efficiency | *h*add | | % | — | 29 | — |

## PACKAGE OUTLINE (7-BA15A)




Unit in mm

j :VGG
k : RF Input
l m: VDD
n : RF Output
o : Vdet

Two VDD pins do not have to be biased at the same time, but at least one of the pins has to be biased.
In case only one pin is biased, The Other pin has to be opened.

**Recommended Bias Configuration**