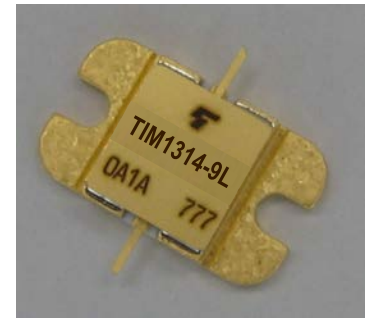


### FEATURES

- BROAD BAND INTERNALLY MATCHED FET
- HIGH POWER  
P1dB= 39.5dBm at 13.75 GHz to 14.5GHz
- HIGH GAIN  
G1dB= 6.0dB at 3.750GHz to 14.5GHz
- LOW INTERMODULATION DISTORTION  
IM3(Min.)=-25dBc at Pout= 33.0dBm  
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= 9V<br>DSset= 2.2A<br>f= 13.75 to 14.5GHz                    | dBm  | 39.0 | 39.5 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB   |  | dB   | 5.0  | 6.0  | —    |
| Drain Current                              | IDS1   |  | A    | —    | 2.8  | 3.0  |
| Gain Flatness                              | ΔG     |  | dB   | —    | —    | ±0.8 |
| Power Added Efficiency                     | ηadd   |  | %    | —    | 26   | —    |
| 3rd Order Intermodulation Distortion       | IM3    | Two Tone Test<br>Po= 24.0dBm, Δf= 5MHz<br>(Single Carrier Level) | dBc  | -25  | —    | —    |
| Drain Current                              | IDS2   |  | A    | —    | 2.8  | 3.0  |
| Channel Temperature Rise                   | ΔTch   | (VDS X IDS + Pin - P1dB)<br>X Rth(c-c)                           | °C   | —    | —    | 80   |

**Recommended Gate Resistance(Rg): 150 Ω**

### ELECTRICAL CHARACTERISTICS ( Ta= 25°C )

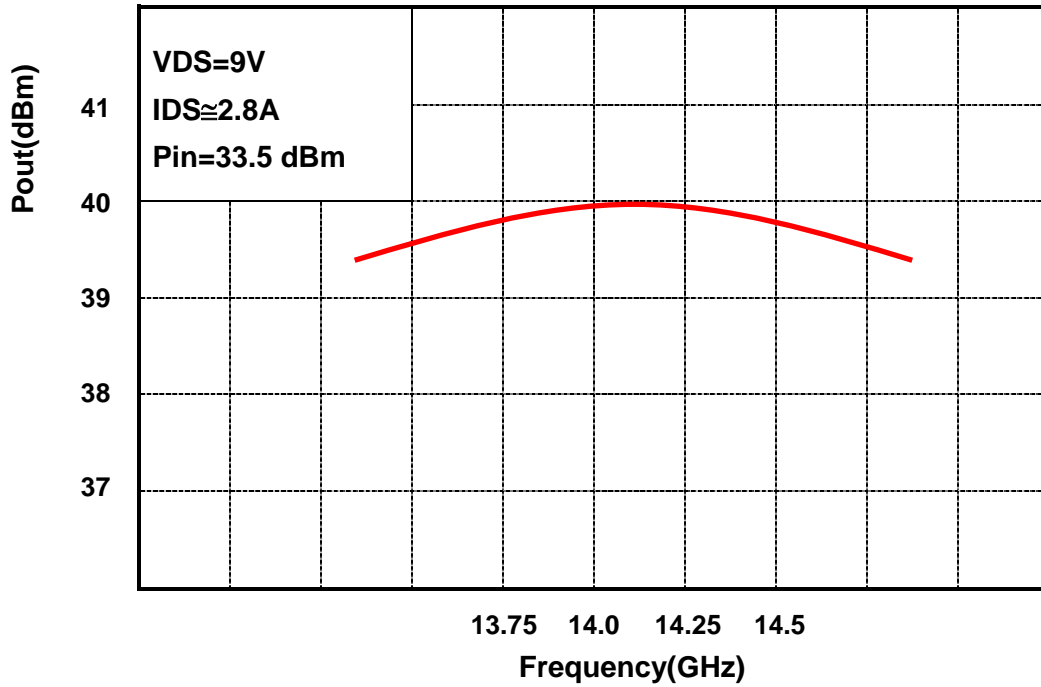
| CHARACTERISTICS               | SYMBOL   | CONDITIONS           | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 2.4A | S    | —    | 2.2  | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 72mA | V    | -0.7 | -2.0 | -4.5 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V   | A    | —    | 5.0  | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -72μA           | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case      | °C/W | —    | 3.0  | 3.7  |

- ◆ The information contained herein is presented as guidance for product use. No responsibility is assumed by TOSHIBA for any infringement of patents or any other intellectual property rights of third parties that may result from the use of product. No license to any intellectual property right is granted by this document. The information contained herein is subject to change without prior notice. It is advisable to contact TOSHIBA before proceeding with design of equipment incorporating this product.

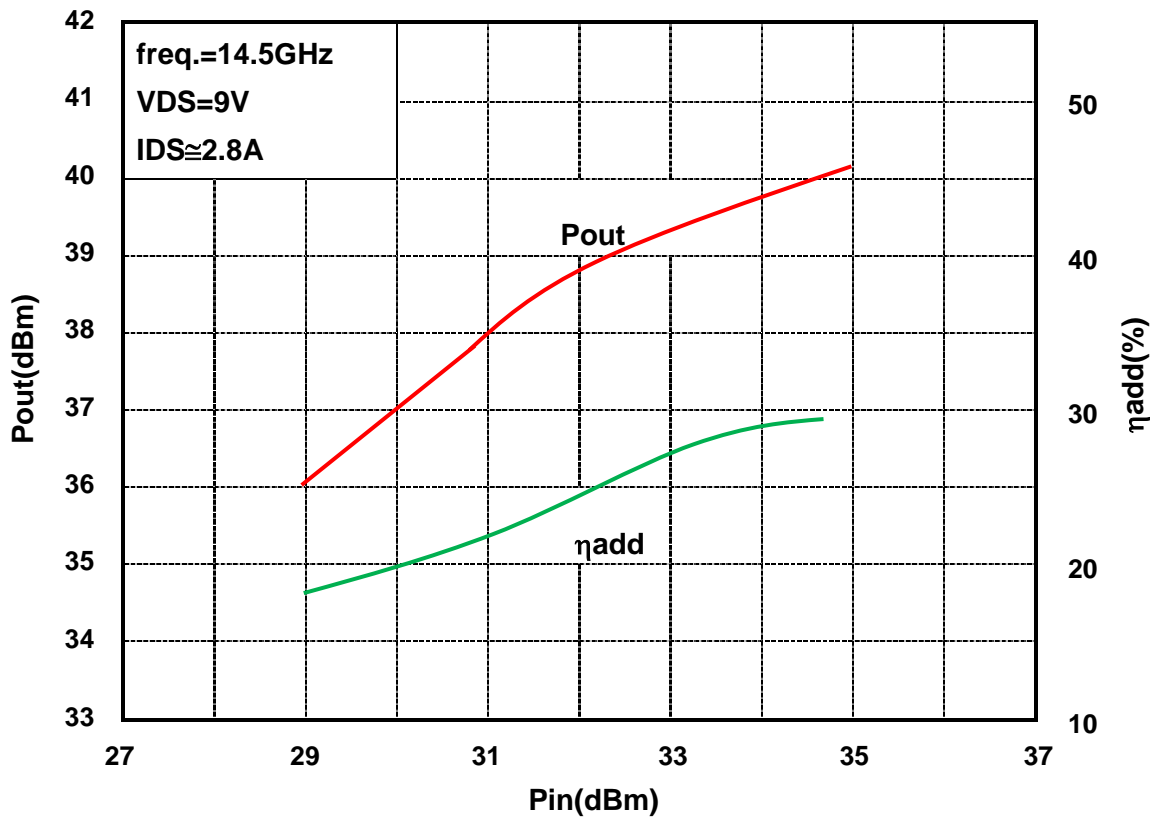


**RF PERFORMANCE**

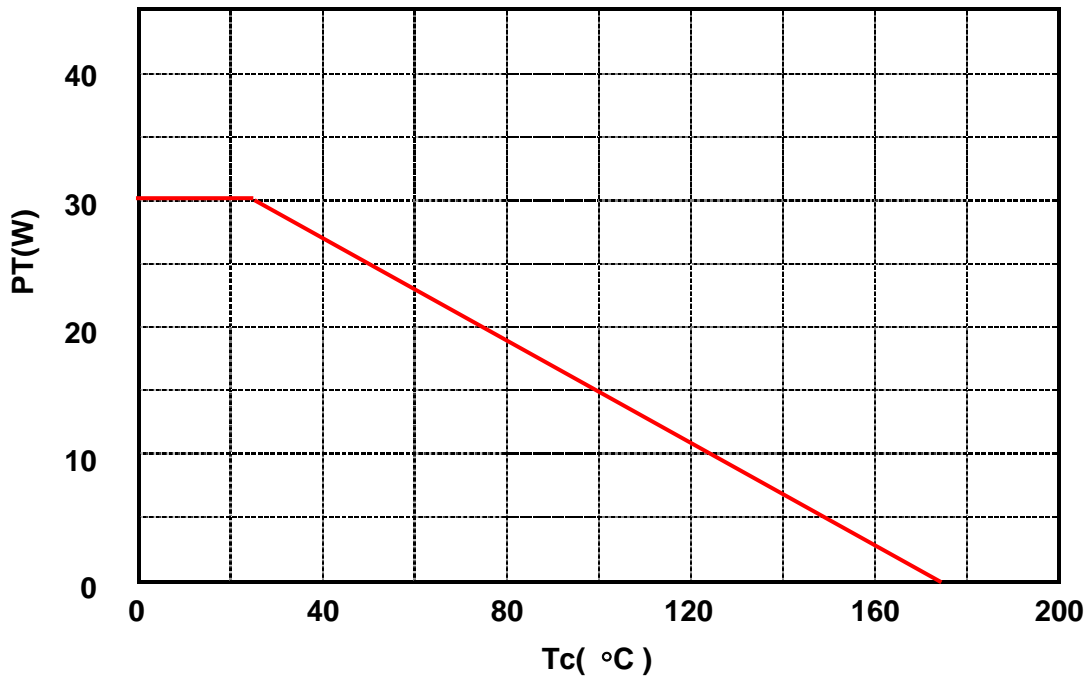
**Output Power (Pout) vs. Frequency**



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



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



**IM3 vs. Output Power Characteristics**

