

**FEATURES**

■ **HIGH POWER**

P1dB=39.5dBm at 3.7GHz to 4.2GHz

■ **HIGH GAIN**

G1dB=11.0dB at 3.7GHz to 4.2GHz

■ **BROAD BAND INTERNALLY MATCHED**

■ **HERMETICALLY SEALED PACKAGE**

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

| CHARACTERISTICS                       | SYMBOL | CONDITION                                              | UNIT | MIN. | TYP. | MAX. |
|---------------------------------------|--------|--------------------------------------------------------|------|------|------|------|
| Output Power at 1dB Compression Point | P1dB   | VDS= 10V<br>f = 3.7 – 4.2GHz                           | dBm  | 38.5 | 39.5 | —    |
| Power Gain at 1dB Compression Point   | G1dB   |                                                        | dB   | 10.0 | 11.0 | —    |
| Drain Current                         | IDS1   |                                                        | A    | —    | 2.2  | 2.6  |
| Gain Flatness                         | ΔG     |                                                        | dB   | —    | —    | ±0.6 |
| Power Added Efficiency                | ηadd   |                                                        | %    | —    | 37   | —    |
| 3rd Order Intermodulation Distortion  | IM3    | Two Tone Test<br>Po= 28.5dBm<br>(Single Carrier Level) | dBc  | -44  | -47  | —    |
| Drain Current                         | IDS2   |                                                        | A    | —    | 2.2  | 2.6  |
| Channel Temperature Rise              | ΔTch   | VDS X IDS X Rth(c-c)                                   | °C   | —    | —    | 80   |

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

| CHARACTERISTICS               | SYMBOL   | CONDITION            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 3.0A | mS   | —    | 1800 | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 30mA | V    | -1.0 | -2.5 | -4.0 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V   | A    | —    | 5.2  | 7.0  |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -100μA          | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case      | °C/W | —    | 2.5  | 3.5  |

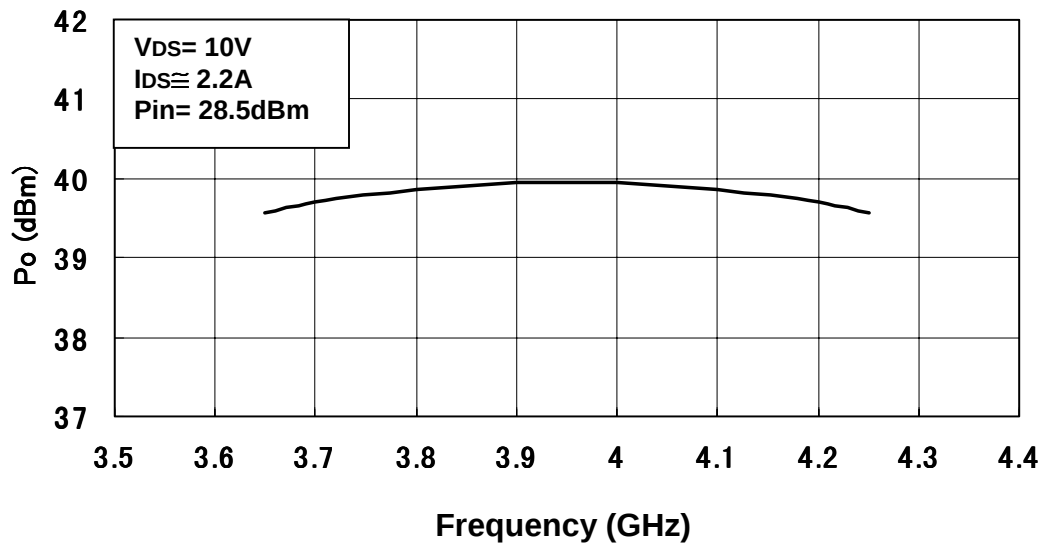
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The information contained herein is subject to change without prior notice. It is therefor advisable to contact TOSHIBA before proceeding with design of equipment incorporating this product.

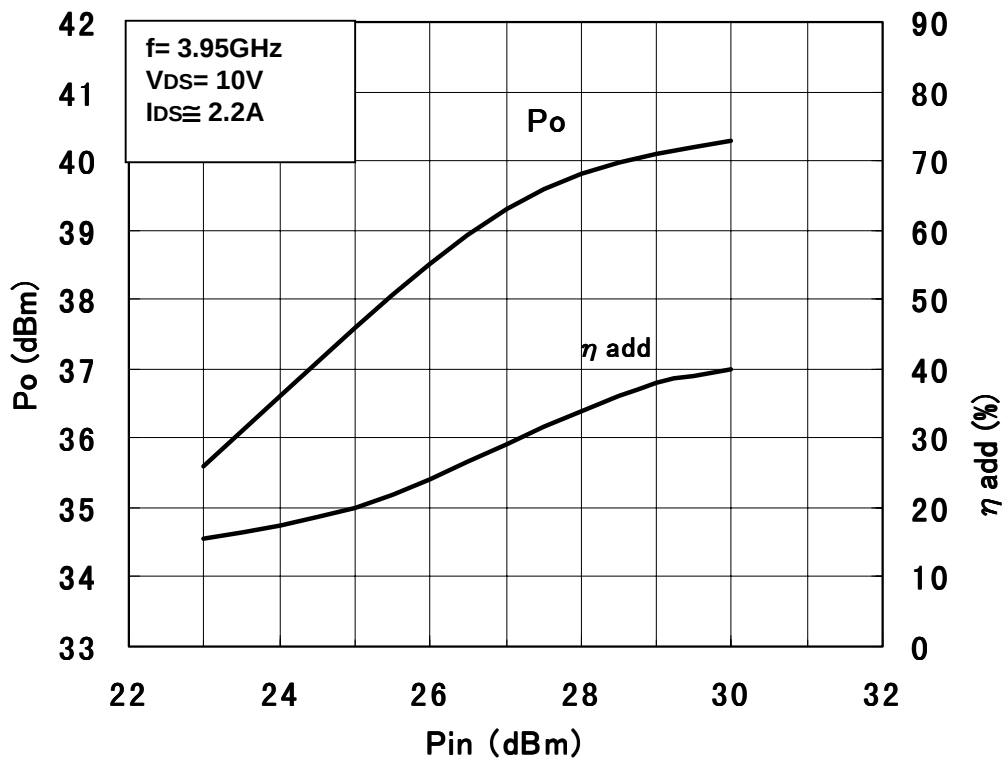


## RF PERFORMANCES

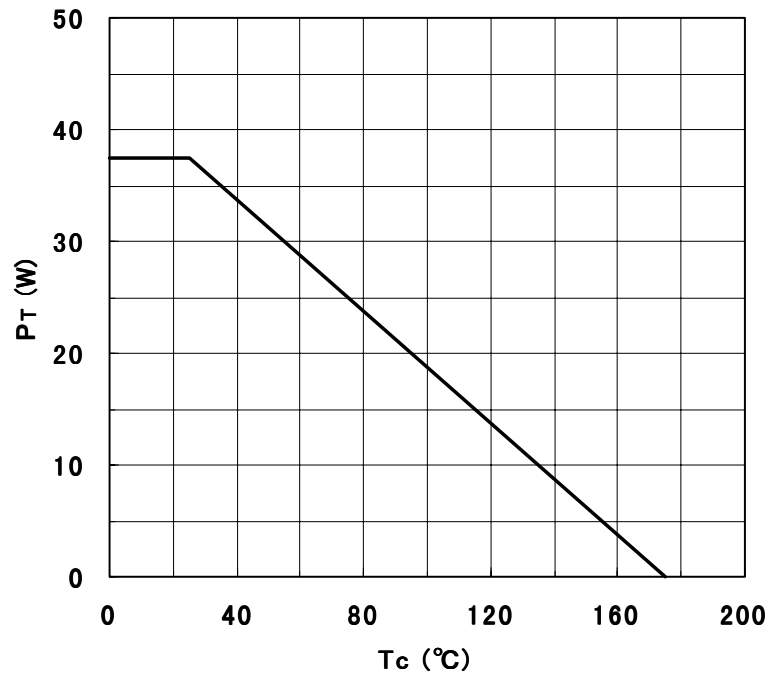
Output Power vs. Frequency



Output Power vs. Input Power



## POWER DISSIPATION vs. CASE TEMPERATURE



## IM3 vs. OUTPUT POWER CHARACTERISTICS

