

**FEATURES**

- **BROAD BAND INTERNALLY MATCHED FET**
- **HIGH POWER**  
P1dB= 42.5dBm at 14.0GHz to 14.5GHz
- **HIGH GAIN**  
G1dB= 6.0dB at 14.0GHz to 14.5GHz
- **LOW INTERMODULATION DISTORTION**  
IM3= -25dBc(Min.) at Pout= 36dBm (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>IDSset= 4.4A<br>f= 14.0 to 14.5GHz                  | dBm  | 42.0 | 42.5 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB   |  | dB   | 5.0  | 6.0  | —    |
| Drain Current                              | IDS1   |  | A    | —    | 5.5  | 6.0  |
| Gain Flatness                              | ΔG     |  | dB   | —    | —    | ±0.8 |
| Power Added Efficiency                     | ηadd   |  | %    | —    | 28   | —    |
| 3rd Order Intermodulation Distortion       | IM3    | Two-Tone Test<br>Po= 36dBm, Δf= 5MHz<br>(Single Carrier Level) | dBc  | -25  | —    | —    |
| Drain Current                              | IDS2   |  | A    | —    | 5.5  | 6.0  |
| Channel Temperature Rise                   | ΔTch   | (VDS × IDS + Pin - P1dB) × Rth(c-c)                            | °C   | —    | —    | 100  |

**Recommended Gate Resistance(Rg): 100 Ω**

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

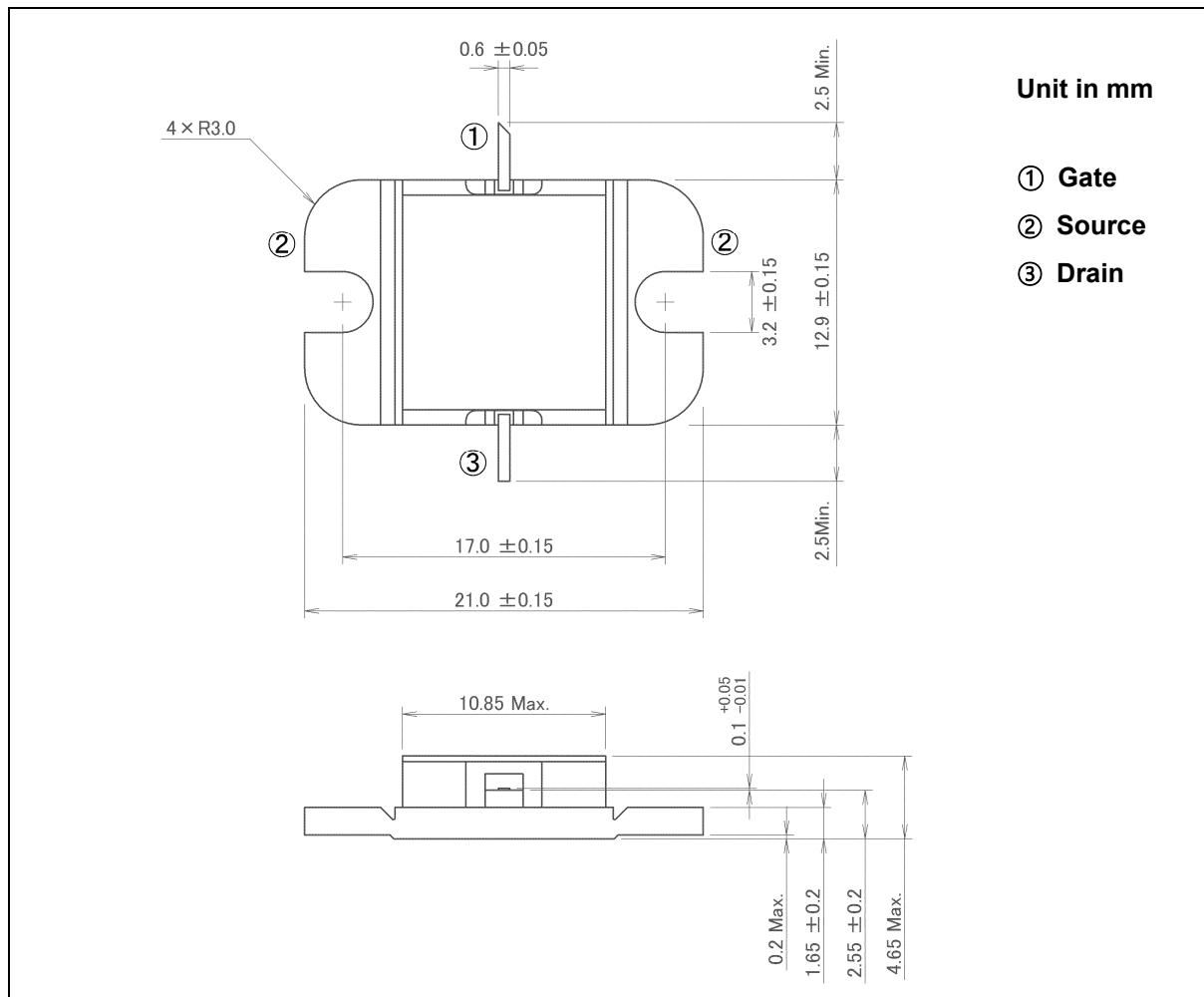
| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 4.8A  | S    | —    | 4.5  | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 145mA | V    | -0.7 | -2.8 | -4.5 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V    | A    | —    | 10.0 | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS= -145μA           | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case       | °C/W | —    | 1.8  | 2.3  |

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

| CHARACTERISTICS                    | SYMBOL | UNIT | RATING      |
|------------------------------------|--------|------|-------------|
| Drain-Source Voltage               | VDS    | V    | 15          |
| Gate-Source Voltage                | VGS    | V    | -5          |
| Drain Current                      | IDS    | A    | 11.5        |
| Total Power Dissipation (Tc= 25°C) | PT     | W    | 65          |
| Channel Temperature                | Tch    | °C   | 175         |
| Storage                            | Tstg   | °C   | -65 to +175 |

**PACKAGE OUTLINE (2-11C1B)**



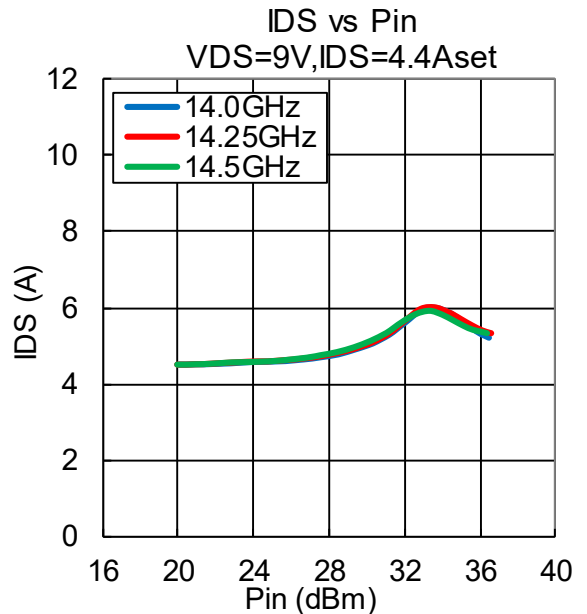
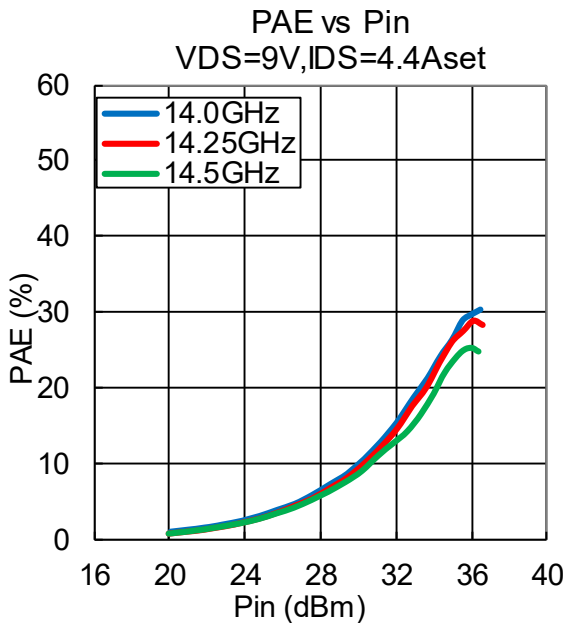
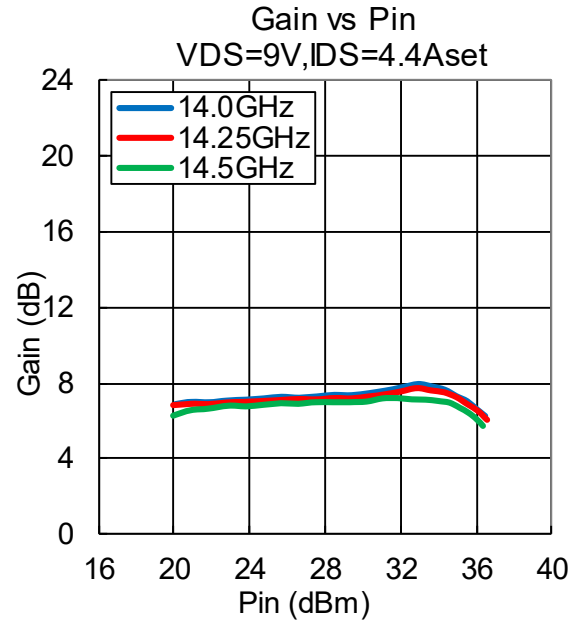
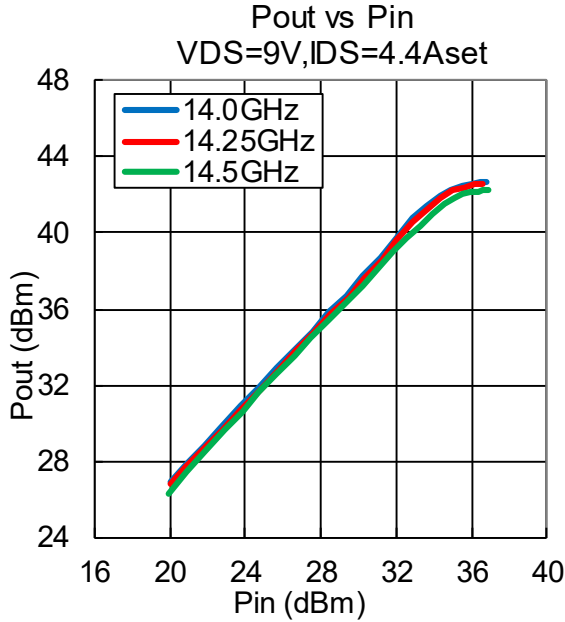
**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

**TYPICAL RF PERFORMANCE**

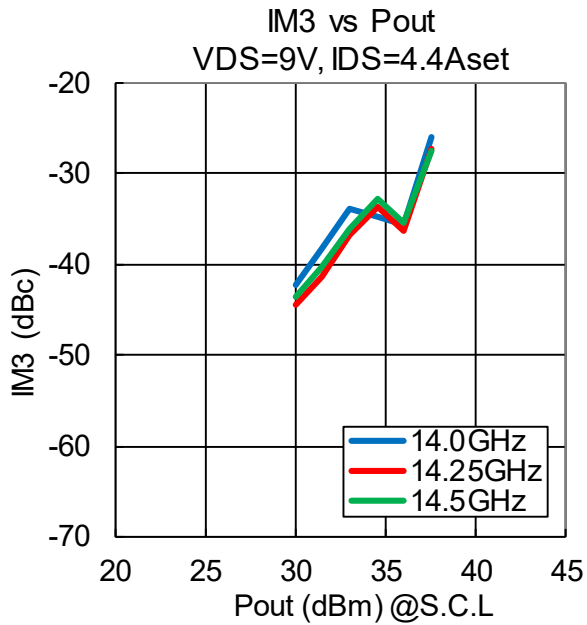
•Pout , Gain , PAE , IDS vs. Pin

VDS= 9 V, IDSset= 4.4 A, f= 14.0, 14.25, 14.5 GHz, Ta= +25 °C



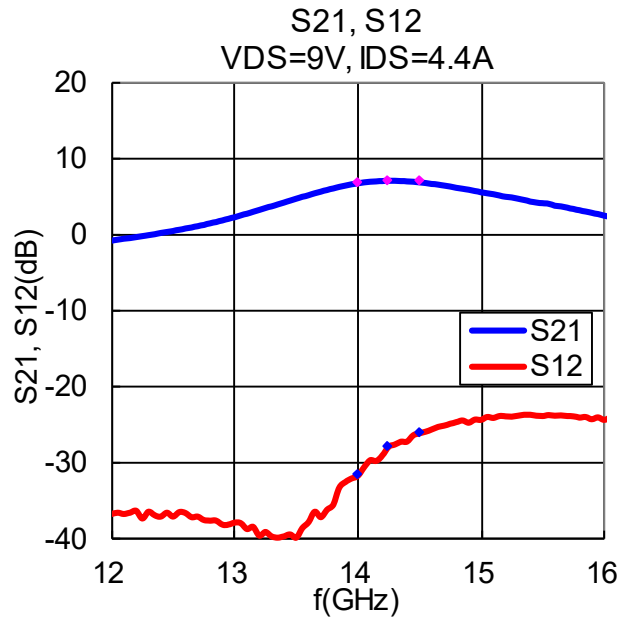
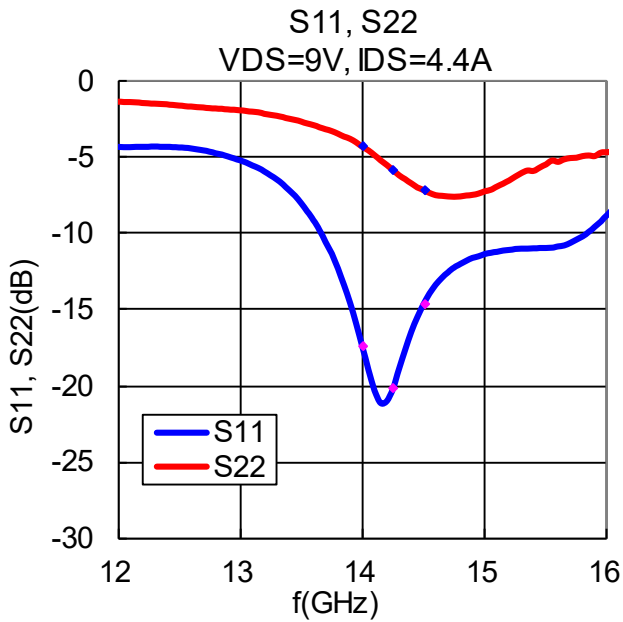
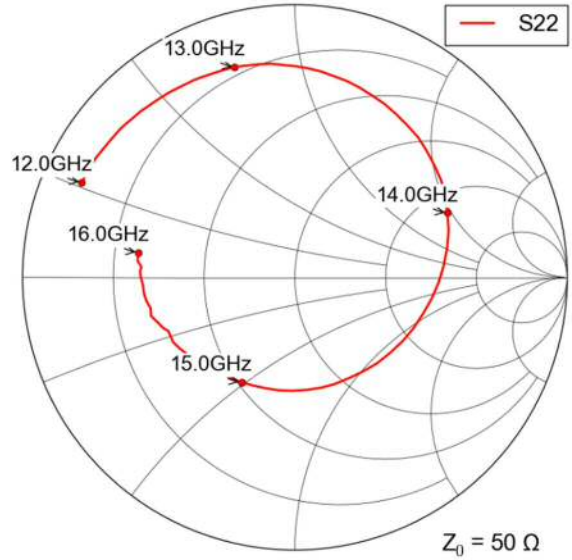
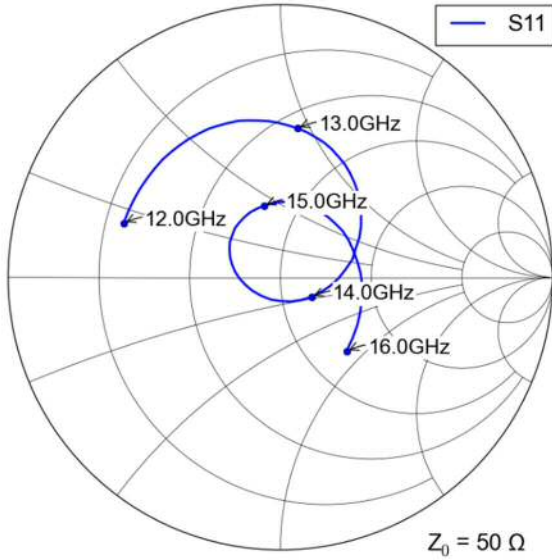
**IM3 vs. Pout**

VDS= 9 V, IDSset= 4.4 A, f= 14.0, 14.25, 14.5 GHz, Δf= 5 MHz, Ta= +25 °C



**-S-Parameters**

VDS= 9 V, IDSset= 4.4 A, f= 12.0 to 16.0 GHz, Ta= +25 °C



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