

## FEATURES

■ **HIGH POWER**

P1dB=45.0 dBm at 5.9GHz to 6.4GHz

■ **HIGH GAIN**

G1dB=10.0dB at 5.9GHz to 6.4GHz

■ **BROAD BAND INTERNALLY MATCHED FET**

■ **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= 10V<br>IDSset=6.4A<br>f = 5.9 to 6.4GHz           | dBm  | 44.0 | 45.0 | —    |
| Power Gain at 1dB Gain Compression Point   | G1dB   |                                                        | dB   | 9.0  | 10.0 | —    |
| Drain Current                              | IDS1   |                                                        | A    | —    | 7.0  | 8.0  |
| Gain Flatness                              | ΔG     |                                                        | dB   | —    | —    | ±0.6 |
| Power Added Efficiency                     | ηadd   |                                                        | %    | —    | 41   | —    |
| 3rd Order Intermodulation Distortion       | IM3    | Two-Tone Test<br>Po=34.0 dBm<br>(Single Carrier Level) | dBc  | -44  | -47  | —    |
| Drain Current                              | IDS2   |                                                        | A    | —    | 7.0  | 8.0  |
| Channel Temperature Rise                   | ΔTch   | (VDS X IDS + Pin – P1dB)<br>X Rth(c-c)                 | °C   | —    | —    | 100  |

Recommended gate resistance(Rg) : Rg= 28 Ω(MAX.)

## ELECTRICAL CHARACTERISTICS ( Ta= 25°C )

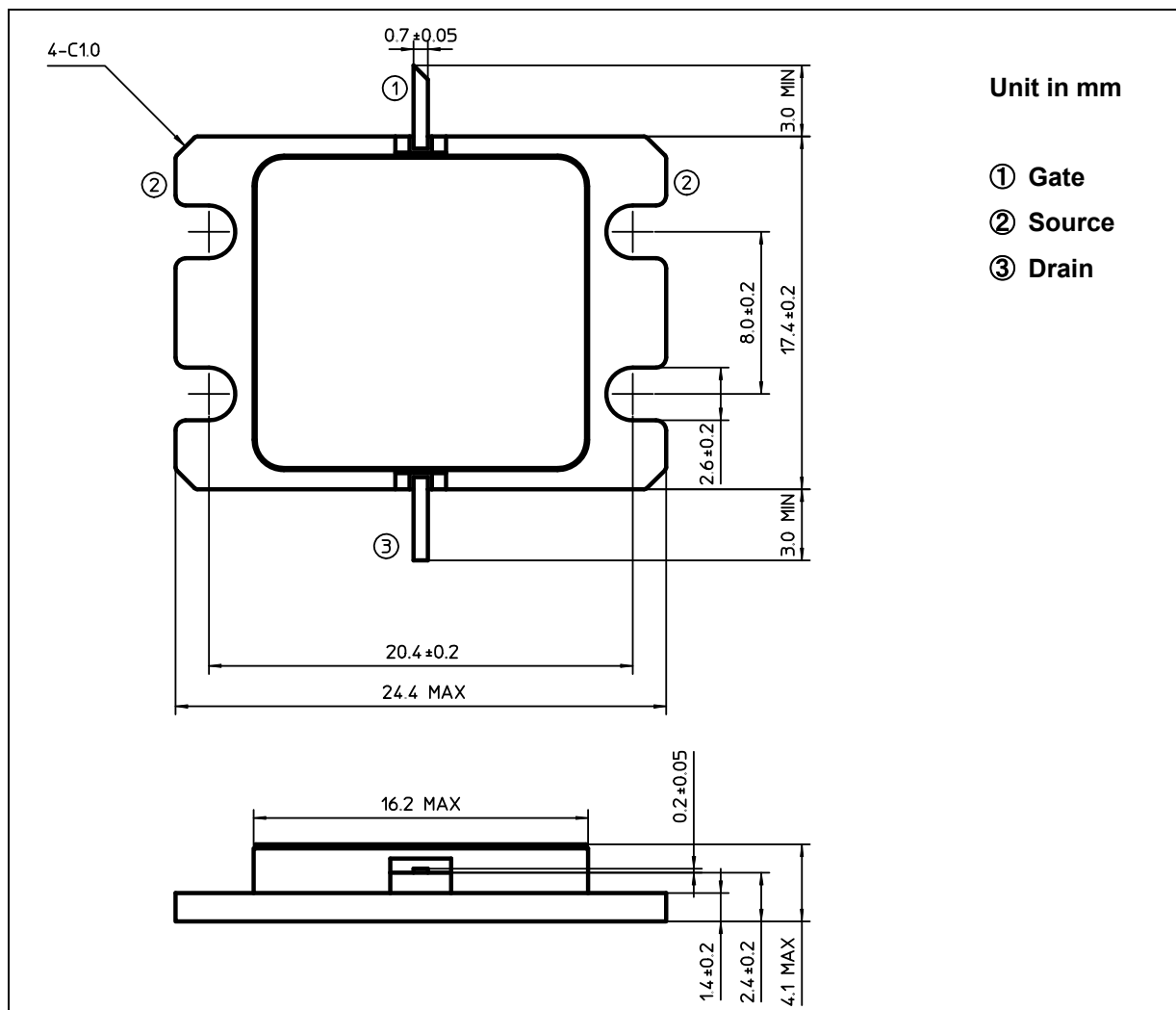
| CHARACTERISTICS               | SYMBOL   | CONDITIONS            | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------|-----------------------|------|------|------|------|
| Transconductance              | gm       | VDS= 3V<br>IDS= 10.0A | mS   | —    | 8000 | —    |
| Pinch-off Voltage             | VGSoff   | VDS= 3V<br>IDS= 80mA  | V    | -0.5 | -2.0 | -3.0 |
| Saturated Drain Current       | IDSS     | VDS= 3V<br>VGS= 0V    | A    | —    | 16.0 | —    |
| Gate-Source Breakdown Voltage | VGSO     | IGS=-240μA            | V    | -5   | —    | —    |
| Thermal Resistance            | Rth(c-c) | Channel to Case       | °C/W | —    | 1.0  | 1.5  |

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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    | 18.0        |
| Total Power Dissipation (Tc= 25 °C) | PT     | W    | 100         |
| Channel Temperature                 | Tch    | °C   | 175         |
| Storage                             | Tstg   | °C   | -65 to +175 |

**PACKAGE OUTLINE (7-AA05A)****HANDLING PRECAUTIONS FOR PACKAGE MODEL**

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