

FEATURES

■ **HIGH POWER**

P_{out}=51.0dBm at P_{in}=44.0dBm

■ **HIGH GAIN**

GL=11.0dB at P_{in}=20.0dBm

■ **BROAD BAND INTERNALLY MATCHED HEMT**

HERMETICALLY SEALED PACKAGE

■ **LOW INTERMODULATION DISTORTION**

IM3(Min.)= -25dBc at P_o=44.0dBm

Single Carrier Level

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

| CHARACTERISTICS | SYMBOL | CONDITIONS | UNIT | MIN. | TYP. | MAX. |
|--------------------------------------|------------------|---|------|------|------|------|
| Output Power | P _{out} | V _{DS} = 24V | dBm | 50.0 | 51.0 | — |
| Drain Current | I _{DS1} | I _{DSset} =4.0A | A | — | 10.0 | 12.0 |
| Power Added Efficiency | η _{add} | f = 7.7 to 8.5GHz @ P _{in} =44dBm | % | — | 42 | — |
| Linear Gain | GL | @P _{in} =20dBm | dB | 10.0 | 11.0 | — |
| Gain flatness | ΔG | | dB | — | — | ±0.8 |
| 3rd Order Intermodulation Distortion | IM3 | Two-Tone Test P _o = 44.0dBm (Single Carrier Level) | dBc | -25 | - 30 | — |
| Drain Current | I _{DS2} | | A | — | — | 8.0 |
| Channel Temperature Rise | ΔT _{ch} | (V _{DS} X I _{DS1} + P _{in} - P _o) X R _{th(c-c)} | °C | — | 120 | 140 |

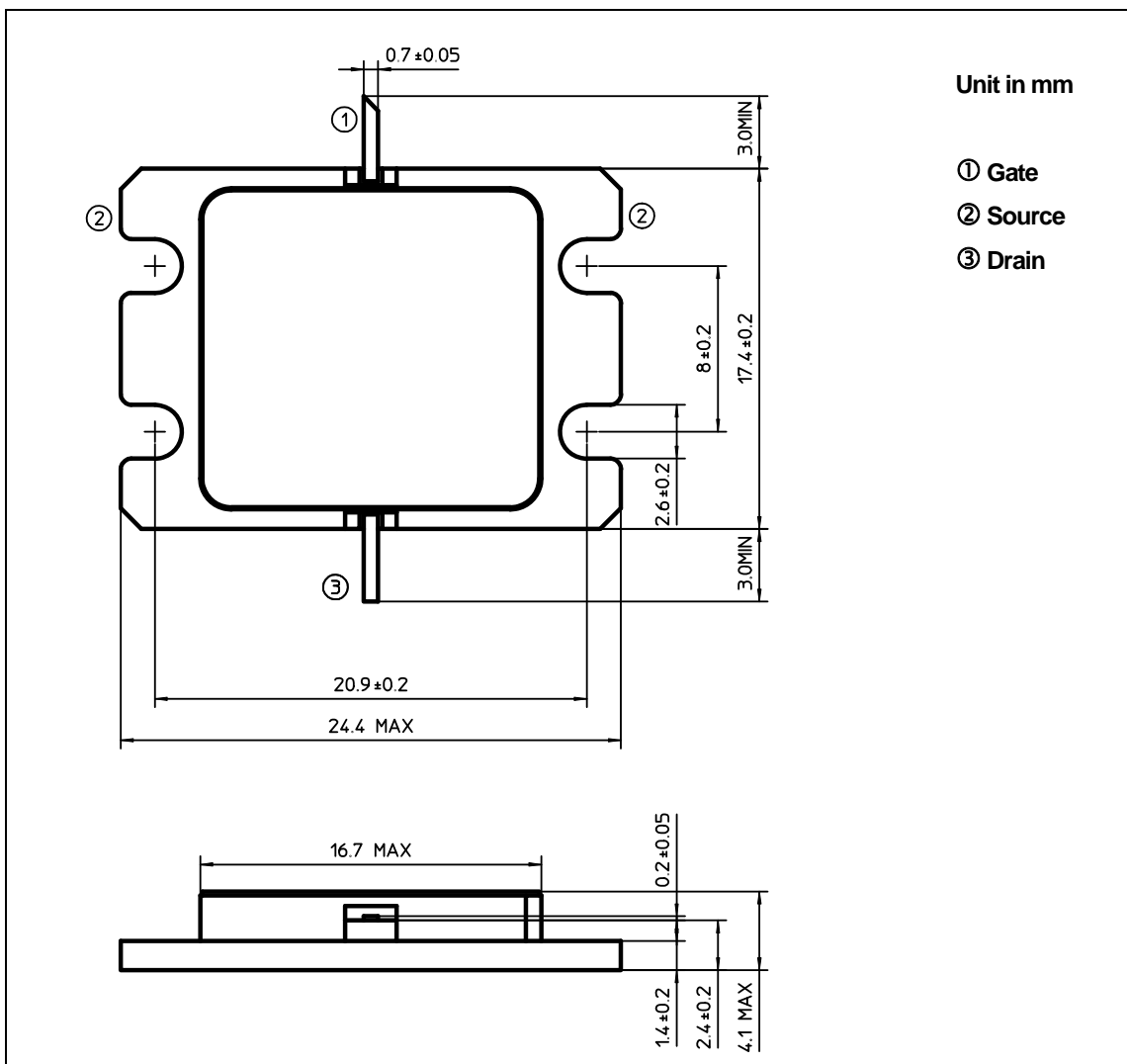
ELECTRICAL CHARACTERISTICS (Ta= 25°C)

| CHARACTERISTICS | SYMBOL | CONDITIONS | UNIT | MIN. | TYP. | MAX. |
|-------------------------------|----------------------|---|------|------|------|------|
| Transconductance | gm | V _{DS} = 5V I _{DS} = 10.0A | S | — | 8.0 | — |
| Pinch-off Voltage | V _{GSo} ff | V _{DS} = 5V I _{DS} = 46mA | V | -1 | -4 | -6 |
| Gate-Source Breakdown Voltage | V _{GSO} | I _{GS} = -20mA | V | - 10 | — | — |
| Thermal Resistance | R _{th(c-c)} | Channel to Case | °C/W | — | 0.6 | 0.8 |

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ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

| CHARACTERISTICS | SYMBOL | UNIT | RATING |
|-------------------------------------|--------|------|-------------|
| Drain-Source Voltage | VDS | V | 50 |
| Gate-Source Voltage | VGS | V | -10 |
| Drain Current | IDS | A | 18.0 |
| Total Power Dissipation (Tc= 25 °C) | PT | W | 280 |
| Channel Temperature | Tch | °C | 250 |
| Storage | Tstg | °C | -65 to +175 |

PACKAGE OUTLINE (7-AA06A)**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

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