

### Performance

- Technology: 0.25um Power GaN HEMT
- Frequency: 6.4~7.2GHz
- Typical Pout : 49.5dBm
- Typical Gain: 9.5dB
- Typical PAE: 45%
- Bias: 28V/-2.8V@6A
- Package: Metal Ceramic

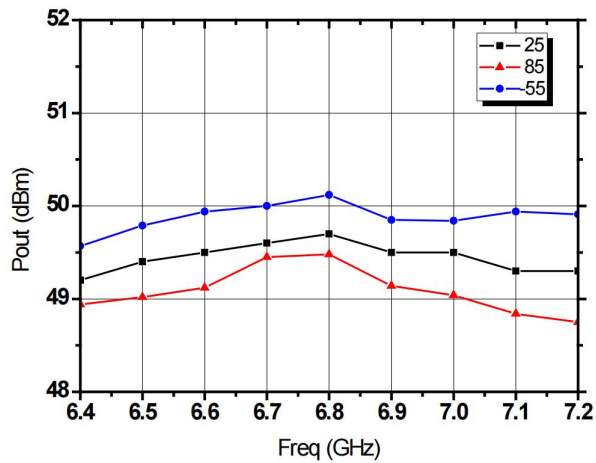


### Electrical Specifications (TA=25°C, Vd=28V, Vg= -2.8V, Id≈6A, F: 6.4~7.2GHz)

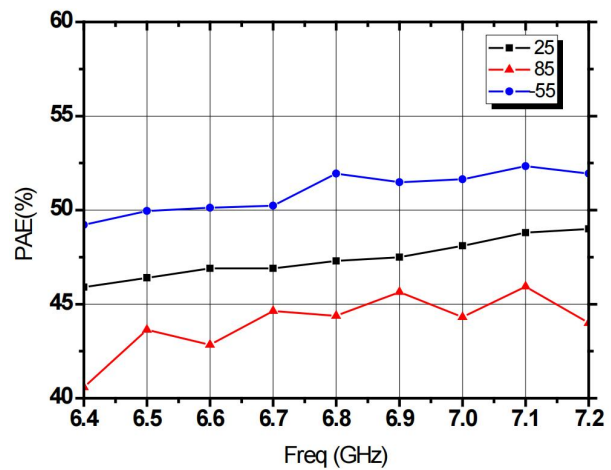
| Symbol       | Parameter              | Min  | Typical | Max  | Unit |
|--------------|------------------------|------|---------|------|------|
| Pout         | Output Power           | 49   | 49.5    | -    | dBm  |
| Gp           | Power Gain             | 9    | 9.5     | -    | dB   |
| $\eta_{add}$ | Power Added Efficiency | 40   | 45      | -    | %    |
| $\Delta Gp$  | Gain Flatness          | -0.8 | -       | +0.8 | dB   |

### Test Curves

Pout&Freq. @ Different Temp.



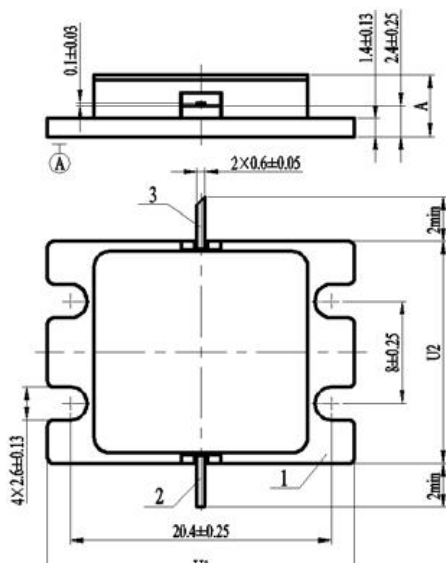
PAE&Freq. @ Different Temp.

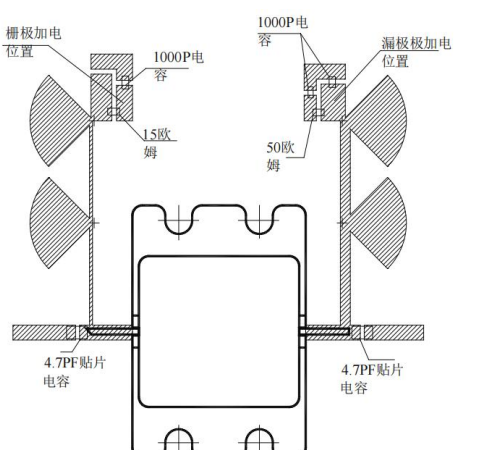


### Absolute Max Ratings (TA=25°C)

| Symbol | Parameter            | Value     | Remark               |
|--------|----------------------|-----------|----------------------|
| Vd     | Drain Voltage        | 40V       |                      |
| Vg     | Grid Voltage         | -5V       |                      |
| Pd     | DC Dissipation       | 225°C     | <b>【1】</b>           |
| Tch    | Channel Temperature  | 300°C     | 1 min, N2 Protection |
| Tm     | Mounting Temperature | -55~175°C |                      |

**【1】** Exceeding any one or combination of these limits may cause permanent damage.

| Outline Drawing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Dimension Symbols                                                                                                                                                                                                                                                    |        |                  |  |      |      |    |       |       |    |       |       |   |   |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------|--|------|------|----|-------|-------|----|-------|-------|---|---|-----|
|  <p>The drawing shows a top view and a side view of the transistor. The top view is a square with rounded corners, with dimensions U1 (width) and U2 (height). The side view shows the thickness of the device with dimensions A (total thickness), 2.4±0.25 (drain thickness), and 1.4±0.13 (gate thickness). Other dimensions include 0.1±0.03 (gate width), 2×0.6±0.05 (gate length), 20.4±0.25 (drain width), 8±0.25 (drain height), 4×2.6±0.13 (drain width), 2min (drain height), and 3 (gate height).</p> | <table><tr><th rowspan="2">Symbol</th><th colspan="2">Value (unit: mm)</th></tr><tr><th>Min.</th><th>Max.</th></tr><tr><td>U1</td><td>23.80</td><td>24.20</td></tr><tr><td>U2</td><td>17.20</td><td>17.60</td></tr><tr><td>A</td><td>-</td><td>5.2</td></tr></table> | Symbol | Value (unit: mm) |  | Min. | Max. | U1 | 23.80 | 24.20 | U2 | 17.20 | 17.60 | A | - | 5.2 |
| Symbol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Value (unit: mm)                                                                                                                                                                                                                                                     |        |                  |  |      |      |    |       |       |    |       |       |   |   |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Min.                                                                                                                                                                                                                                                                 | Max.   |                  |  |      |      |    |       |       |    |       |       |   |   |     |
| U1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 23.80                                                                                                                                                                                                                                                                | 24.20  |                  |  |      |      |    |       |       |    |       |       |   |   |     |
| U2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 17.20                                                                                                                                                                                                                                                                | 17.60  |                  |  |      |      |    |       |       |    |       |       |   |   |     |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -                                                                                                                                                                                                                                                                    | 5.2    |                  |  |      |      |    |       |       |    |       |       |   |   |     |

| Application Circuit                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>The diagram shows the transistor with its gate, drain, and source connections. The gate is connected to a 1000P capacitor and a 15 ohm resistor. The drain is connected to a 1000P capacitor and a 50 ohm resistor. The source is connected to a 4.7PF capacitor. The diagram also shows the gate, drain, and source locations.</p> |

**Note:**

- (1) This product is an internal matching tube, and the input and output impedance values are both 50 ohms;
- (2) Please strictly follow the order of adding negative electricity first and then positive electricity in the power-on sequence. When de-energizing, first reduce the drain voltage and then reduce the gate voltage;
- (3) This product is a high-power device. It is necessary to pay attention to heat dissipation during use. The higher the case temperature, the shorter the service life. It is advisable to use the temperature not higher than 80 degrees;
- (4) This product is an electrostatic sensitive device. It is necessary to pay attention to electrostatic protection during storage and use, and it needs to be well grounded when using it.