

Performance

- Technology: 0.25um Power GaN HEMT
- Frequency: 7.7~8.3GHz
- Typical Pout : 44dBm
- Typical Gain: 8dB
- Typical PAE: 45%
- Bias: 28V/-2~-3V
- Package: Metal Ceramic

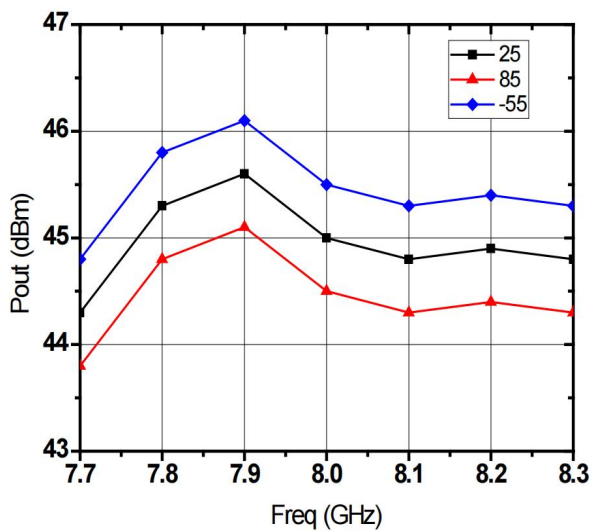


Electrical Specifications ($T_A=25^{\circ}\text{C}$, $V_d=28\text{V}$, $V_g=-2\sim-3\text{V}$, $F: 7.7\sim 8.3\text{GHz}$, $PL=150\mu\text{s}$, $D.C=10\%$)

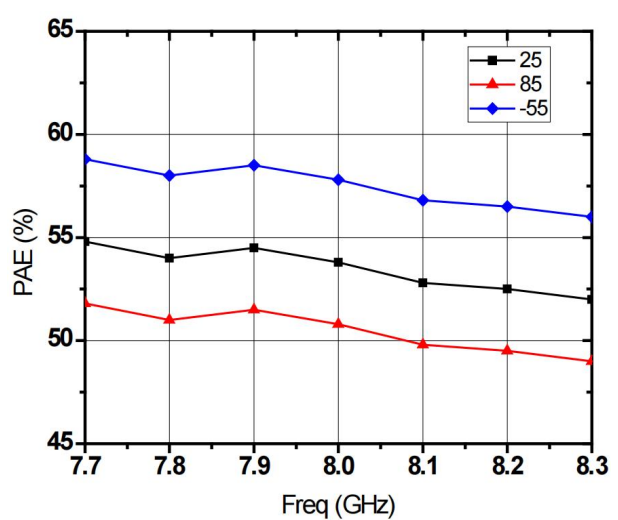
Symbol	Parameter	Min	Typical	Max	Unit
Pout	Output Power	-	44	-	dBm
Gp	Power Gain	-	8	-	dB
η_{add}	Power Added Efficiency	-	45	-	%
Rth	Thermal Resistance	-	-	-	$^{\circ}\text{C/W}$
ΔGp	Gain Flatness	-0.8	-	+0.8	dB

Test Curves

Pout&Freq. @ Different Temp.



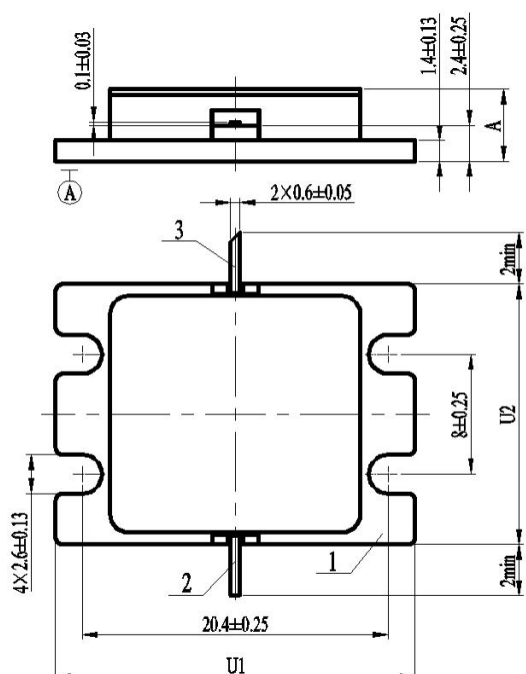
PAE&Freq. @ Different Temp.



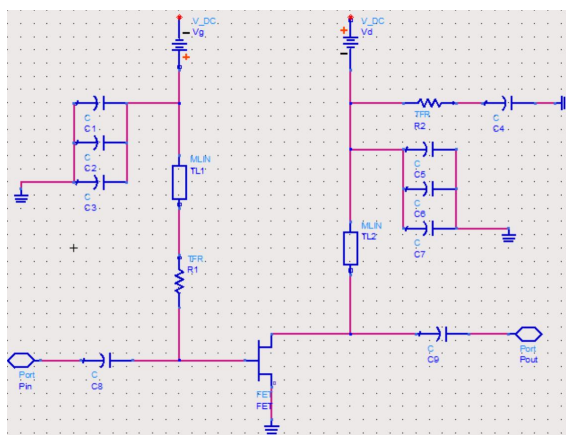
Absolute Max Ratings ($T_A=25^\circ\text{C}$)

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	32V	
Vg	Grid Voltage	-5V	
Pd	DC Dissipation	180W	25°C
Tch	Channel Temperature	225°C	【1】
Tm	Mounting Temperature	300°C	1 min, N2 Protection
Tstg	Storage Temperature	-55~175°C	

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

Outline Drawing	Dimension Symbols														
 The drawing shows the physical dimensions of the transistor. The top view includes a central square pad with a width of 20.4 ± 0.25 mm (U1) and a height of 8 ± 0.25 mm (U2). The side view shows a total height of 2.4 ± 0.25 mm (A) and a top layer thickness of 0.1 ± 0.03 mm. Other dimensions include 1.4 ± 0.13 mm, $2 \times 0.6 \pm 0.05$ mm, $4 \times 2.6 \pm 0.13$ mm, and a minimum clearance of 2mm.	<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
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	Min.	Max.													
U1	23.80	24.20													
U2	17.20	17.60													
A	-	5.2													

Application Circuit



Parameter	Symbol	Value	Unit
Filter capacitor	C1,C2,C4, C5,C6	1000	pF
Filter capacitor	C3,C7	100	pF
DC isolation capacitance	C8,C9	2	pF
Stabilizing resistance	R1	15	Ω
Resistance	R2	50	Ω
Microstrip line	TL1,TL2	$\lambda/4$	-

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.