

Performance

- Technology: 0.25um Power GaN HEMT
- Frequency: 7.7~8.5GHz
- Typical Pout : 53dBm
- Typical Gain: 8.5dB
- Typical PAE: 45%
- Bias: 32V/-2~-3V
- Package: Metal Ceramic

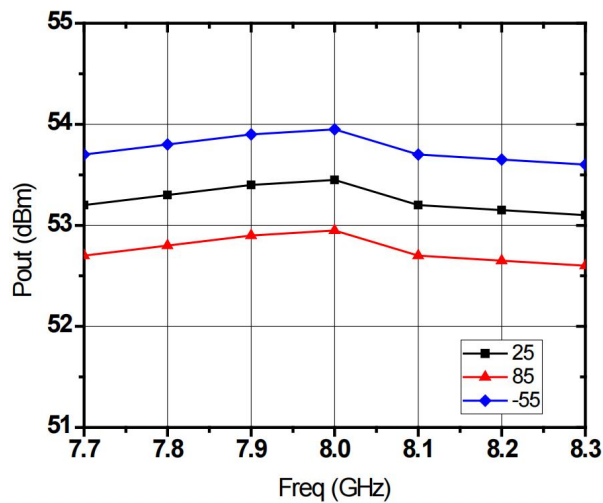


Electrical Specifications (TA=25°C, Vd=32V, Vg=-2~-3V, PL=1ms, D.C=10%, F: 7.7~8.5GHz)

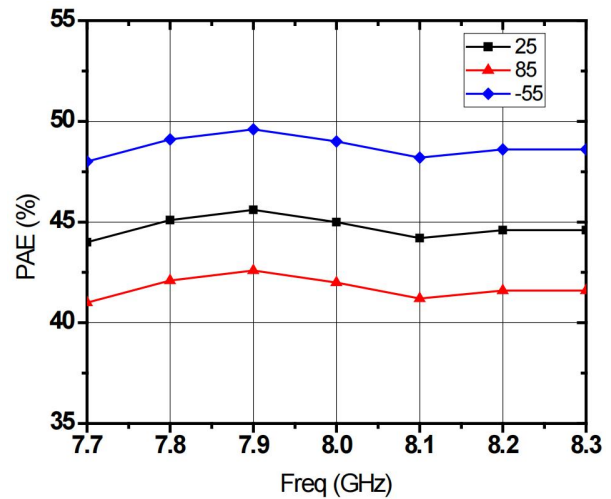
Symbol	Parameter	Min	Typical	Max	Unit
Pout	Output Power	-	53	-	dBm
Gp	Power Gain	-	8.5	-	dB
η_{add}	Power Added Efficiency	-	45	-	%
Rth	Thermal Resistance	-	-	-	°C/W
ΔGp	Gain Flatness	-0.8	-	+0.8	dB

Test Curves

Pout&Freq. @ Different Temp.



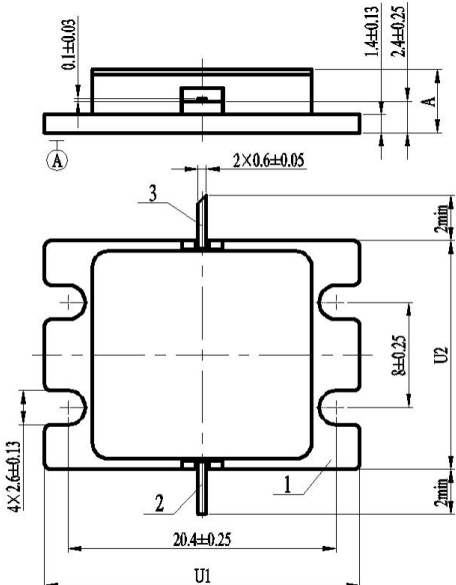
PAE&Freq. @ Different Temp.

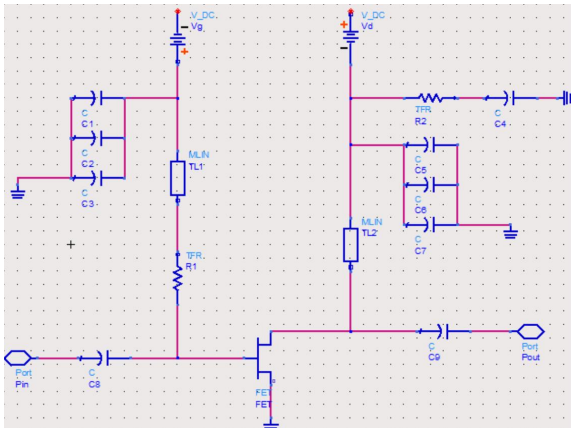


Absolute Max Ratings (T_A=25°C)

Symbol	Parameter	Value	Remark
V _d	Drain Voltage	50V	
V _g	Grid Voltage	-5V	
P _d	DC Dissipation	180W	25°C
T _{ch}	Channel Temperature	225°C	【1】
T _m	Mounting Temperature	300°C	1 min, N ₂ Protection
T _{stg}	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 rounded corners, surrounded by a larger square pad. Dimensions include: central pad side length 8 ± 0.25 mm, outer pad side length 20.4 ± 0.25 mm, distance between pads 2.4 ± 0.25 mm, and overall width 20.4 ± 0.25 mm. The side view shows a height of 0.1 ± 0.05 mm for the central pad and 1.4 ± 0.13 mm for the outer pad. A dimension of $2\times0.6\pm0.05$ mm is shown for the mounting holes.	<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	Pad Definition																												
	<table><tr><th>Parameter</th><th>Symbol</th><th>Value</th><th>Unit</th></tr><tr><td>Filter capacitor</td><td>C1,C2,C4, C5,C6</td><td>1000</td><td>pF</td></tr><tr><td>Filter capacitor</td><td>C3,C7</td><td>100</td><td>pF</td></tr><tr><td>DC isolation capacitance</td><td>C8,C9</td><td>20</td><td>pF</td></tr><tr><td>Stabilizing resistance</td><td>R1</td><td>15</td><td>Ω</td></tr><tr><td>Resistance</td><td>R2</td><td>50</td><td>Ω</td></tr><tr><td>Microstrip line</td><td>TL1,TL2</td><td>$\lambda/4$</td><td>-</td></tr></table>	Parameter	Symbol	Value	Unit	Filter capacitor	C1,C2,C4, C5,C6	1000	pF	Filter capacitor	C3,C7	100	pF	DC isolation capacitance	C8,C9	20	pF	Stabilizing resistance	R1	15	Ω	Resistance	R2	50	Ω	Microstrip line	TL1,TL2	$\lambda/4$	-
Parameter	Symbol	Value	Unit																										
Filter capacitor	C1,C2,C4, C5,C6	1000	pF																										
Filter capacitor	C3,C7	100	pF																										
DC isolation capacitance	C8,C9	20	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.