

Performance

- Technology: 0.5um Power GaN HEMT
- Frequency: 1.8~2.1GHz
- Typical Pout : 56dBm
- Typical Gain: 12dB
- Typical PAE: 55%
- Bias: 50V/-3V
- Package: Metal Ceramic

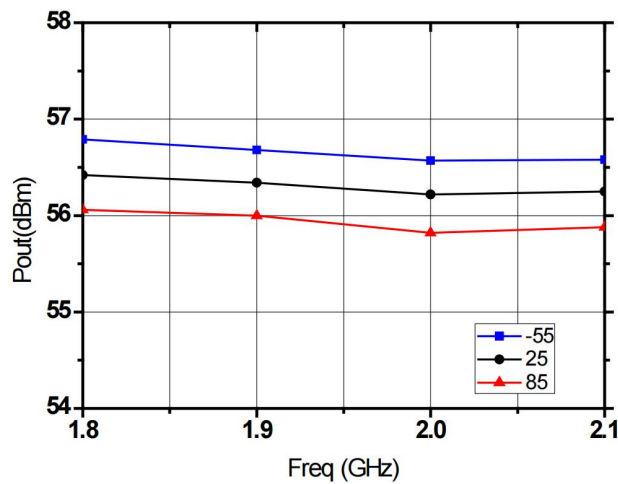


Electrical Specifications (TA=25°C, Vd=50V, PL=300us, D.C=10%, Vg= -3V, F: 1.8-2.1GHz)

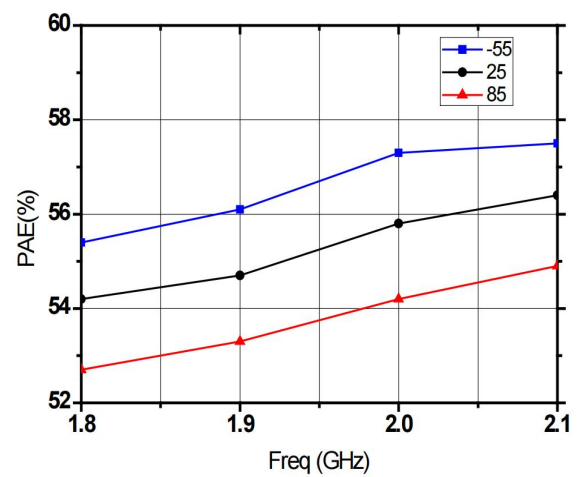
Symbol	Parameter	Min	Typical	Max	Unit
Pout	Output Power	-	56	-	dBm
G	Small Signal Gain		14		
Gp	Power Gain	-	12	-	dB
η_{add}	Power Added Efficiency	52	55	-	%
Rth	Thermal Resistance	-	-	0.24	°C/W

Test Curves

Pout&Freq. @ Different Temp.



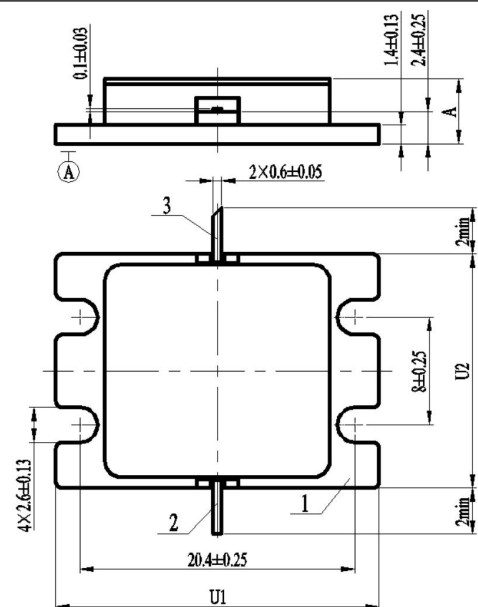
PAE&Freq. @ Different Temp.

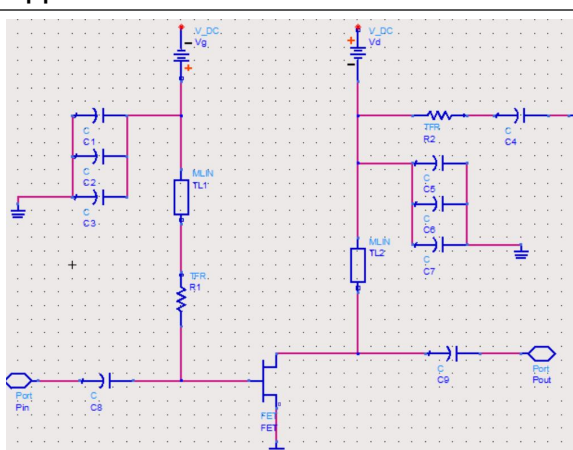


Absolute Max Ratings (T_A=25°C)

Symbol	Parameter	Value	Remark
V _d	Drain Voltage	60V	
V _g	Grid Voltage	-5V	
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	
T _c	Operating Temperature	-55~85°C	

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

Outline Drawing	Dimension Symbol														
 The drawing shows a top view and a side view of the transistor. The top view is a square package with dimensions: U1 (width) = 20.4±0.25 mm, U2 (height) = 8.4±0.25 mm. The side view shows a height of 1.4±0.13 mm and a width of 2.4±0.25 mm. Other dimensions include 0.1±0.05 mm, 2×0.6±0.05 mm, 2 min, 4×2.6±0.13 mm, and 2 min.	<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
 The diagram shows a GaN transistor circuit. It includes a drain supply V_{DC} and a gate supply V_g. The circuit features a drain resistor R_d, a gate resistor R_g, and a load resistor R_L. The transistor is labeled M₁ and M₂. The circuit also includes a microstrip line TL1 and TL2, and a filter capacitor C₁. The output is labeled Port Out.	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	λ/4	-

Note:

- (1) This product is an internal matching tube, with input and output impedance values of 50 ohms;
- (2) The power-on sequence shall be in strict accordance with the sequence of applying negative power first and then positive power. When power-off, the leakage voltage shall be reduced first and then the grid voltage shall be reduced;
- (3) This product is a high-power device. Pay attention to heat dissipation during use. The higher the shell temperature is, the shorter the service life is. The service temperature should not be higher than 80 °C;
- (4) This product is an electrostatic sensitive device. It needs to pay attention to electrostatic protection during storage and use, and it needs to be grounded well during use.