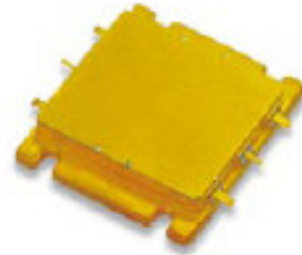


4.0-8.0 GHz GaN Internally Matched Transistor

► Features

- Technical Type: 0.25um GaN HEMT
- Frequency: 4.0-8.0 GHz
- Typical Output Power: 49dBm(C/W)
- Typical Power Gain: 7dB
- Typical PAE: 35%
- Bias Voltage: 28V/1A
- Package: Hermetic Metal Ceramic Package



► General Description

GaN high power, high efficiency inter-matched power transistor. It uses 0.25 um GaN HEMT process, and metal-ceramic package. It can provide 49dBm output power, 7dB gain, with 35% PAE under $V_{ds}=28V$ by dual power supply.

► Absolute Maximum Ratings¹

Symbol	Parameter	Value	Remark
V_{ds}	Drain Source Voltage	40V	
V_{gs}	Gate Source Voltage	-5V	
P_d	DC power dissipation	200W	25°C
T_{ch}	Channel Temperature	225°C	[1]
T_m	Mounting Temperature	300°C	1min. N ₂ protection
T_{stg}	Storage Temperature	-55~175°C	

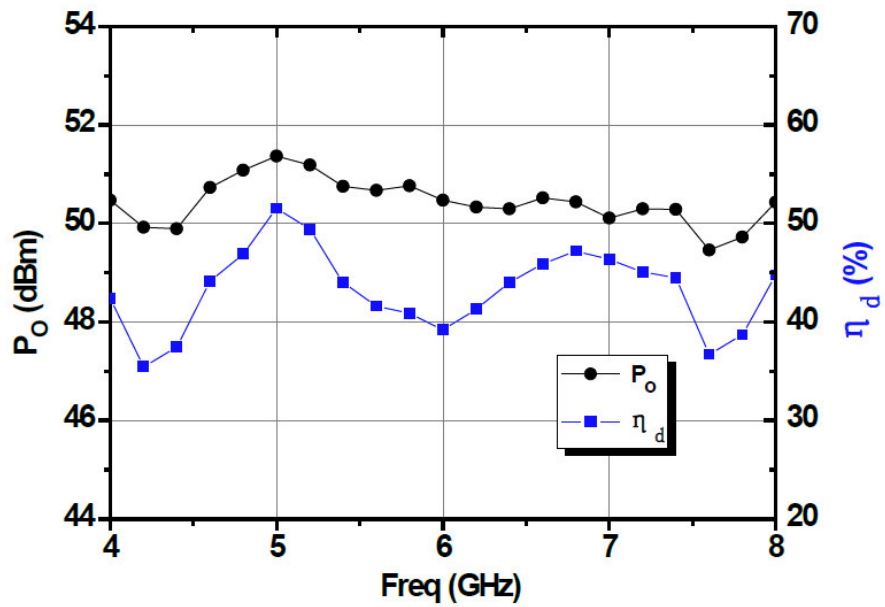
1. Exceeding any one or combination of these limits may cause permanent damage

4.0-8.0 GHz GaN Internally Matched Transistor

► Electrical Characteristics ($T_A=25^\circ\text{C}$)

Symbol	Parameter	Test Condition	Value			Unit
			Min.	Typ.	Max.	
P_{out}	Output Power	$V_d=28\text{V}$ $I_d=1\text{A}$ F: 4.0-8.0GHz $P_{in}=42\text{dBm}$ C/W	-	49	-	dBm
G_p	Power Gain		-	7	-	dB
η_{add}	PAE		-	35	-	%
ΔG_p	Gain Flatness		-1.0	-	+1.0	dB

► Typical Performance ($T_A=25^\circ\text{C}$)



4.0-8.0 GHz GaN Internally Matched Transistor

▶ *Application Circuit*

Application Notes:

- (1) The product is internally matched transistor with 50 Ohm input & output resistance;
- (2) Please follow the right procedures strictly: Negative should be added prior to the positive during power sequence. Drain voltage should be dropped prior to gate voltage when removing power sequence.
- (3) The product is HPA, please be attention for heat radiation during operation. Its life will be shorter by higher case temperature. Recommend case temperature is not exceeding 80°C degrees.
- (4) The device should be stored in clean and dry environment. Please be aware of anti-static and keep all the equipments are well-earthed during the assembling.
- (5) Isolator is needed at input port as high VSWR input.