

## 25 Watt ♦ 4 GHz ♦ GaN on SiC ♦ Packaged Transistor

- ♦ GaN HEMT Technology
- ♦ All Gold Metal System
- ♦ Broadband Unmatched Design
- ♦ Frequency of Operation: DC to 4GHz
- ♦ 28V Operation
- ♦ S-Parameter CAD Files Available Upon Request



### Absolute Maximum Ratings

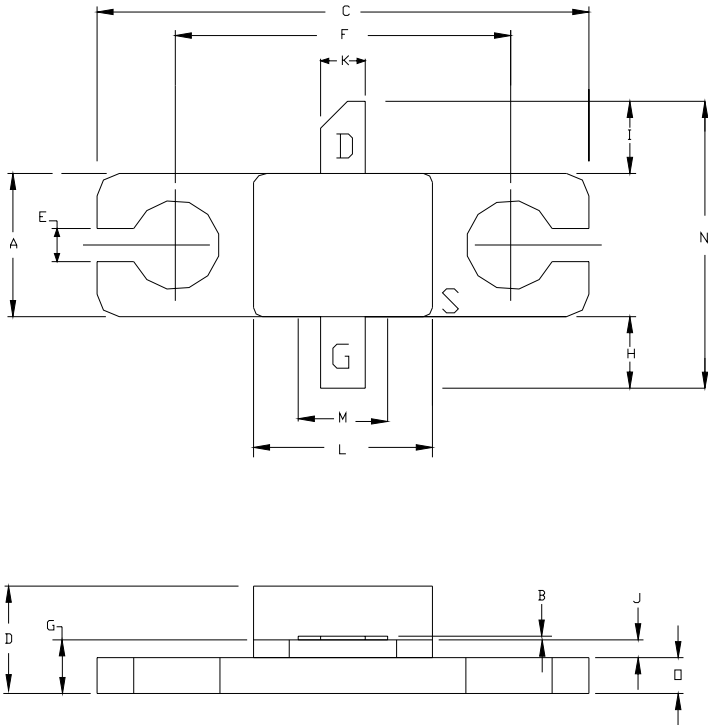
Parameter	Symbol	Rating	Units	Conditions
Drain Voltage	$V_D$	40	V	25°C
Gate Voltage	$V_G$	-50 to 0	V	25°C
Drain-Gate Voltage	$V_{DG}$	80	V	25°C
Drain Current	$I_D$	5.0	A	25°C
Gate Current	$I_G$	28	mA	25°C
Input CW Power	$P_{IN}$	37	dBm	25°C
Storage Temperature	$T_{STG}$	-55 to +150	°C	--
Channel Temperature	$T_{CH}$	200	°C	--

### Parameters

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Gate Threshold Voltage	$V_{GS(TH)}$	--	-3.6	--	V	$V_{DS} = 28\text{ V}, I_D = 500\text{ mA}$
Capacitance Gate-Source	$C_{GS}$	--	3.6	--	pF	$V_{DS} = 28\text{ V}, I_D = 500\text{ mA}$
Capacitance Gate-Drain	$C_{GD}$	--	0.12	--	pF	$V_{DS} = 28\text{ V}, I_D = 500\text{ mA}$
Capacitance Drain-Source	$C_{DS}$	--	0.6	--	pF	$V_{DS} = 28\text{ V}, I_D = 500\text{ mA}$
Gain	G	--	18	--	dB	Note 1
Power Output Saturated	$P_{SAT}$	--	44	--	dBm	Note 1
Power Added Efficiency	PAE	--	56	--	%	Note 1
Leak Rate	LR	--	--	$1 \times 10^{-3}$	--	Rate per MIL-STD-750D, atm-cm <sup>3</sup> /sec
Thermal Resistance	$\theta_{JC}$	--	--	4.0	°C/W	Note 1, $P_{OUT} = 44\text{ dBm}$

Note 1:  $V_{DD}=28\text{V}, I_{DQ}=500\text{mA}, T_F=25^\circ\text{C}, F=3.0\text{GHz}$ .

**Package Outline Drawing**



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.155	0.165	3.94	4.19
B	0.003	0.006	0.07	0.15
C	0.545	0.555	13.84	14.09
D	0.112	0.146	2.84	3.70
E	0.027	0.037	0.68	0.94
F	0.370	0.380	9.40	9.65
G	0.057	0.067	1.45	1.70
H	0.060	0.100	1.52	2.54
I	0.060	0.100	1.52	2.54
J	0.015	0.025	0.38	0.63
K	0.045	0.055	1.14	1.40
L	0.195	0.205	4.95	5.21
M	0.165	0.175	4.19	4.44
N	0.315	0.325	8.00	8.25
Q	0.035	0.045	0.89	1.14

PIN SCHEDULE	
D	DRAIN
S	SOURCE
G	GATE

## Definitions

Data Sheet Status	
Proposed Specification	This data sheet contains proposed specifications.
Preliminary Specification	This data sheet contains specifications based on preliminary measurements and data.
Product Specification	This data sheet contains final product specifications.
Maximum Ratings	
Stress above one or more of the maximum ratings may cause permanent damage to the device. These are maximum ratings only operation of the device at these or at any other conditions above those given in the characteristics sections of the specification is not implied. Exposure to maximum values for extended periods of time may affect device reliability.	

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