2425GN-150CW

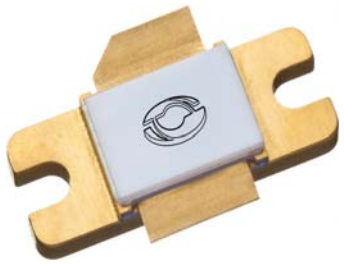
150 Watts - 48 Volts,
CW Transistor at 2.45GHz

GENERAL DESCRIPTION

The 2425GN-150CW is an internally matched, COMMON SOURCE, class AB, GaN on SiC HEMT transistor capable of providing over 11 dB gain, 150 Watts minimum output power at continuous wave (CW) condition at 2450 MHz band. This hermetically sealed transistor is utilizes gold metallization and eutectic attach to provide highest reliability and superior ruggedness.

Market Application –S-Band ISM applications

CASE OUTLINE
55-KR
Common Source



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation

Device Dissipation @ 25°C 300 W

Maximum Voltage and Current

Drain-Source Voltage (V_{DSS}) 150 V
Gate-Source Voltage (V_{GS}) -8 to +0 V

Maximum Temperatures

Storage Temperature (T_{STG}) -55 to +125° C
Operating Junction Temperature +220 °C

ELECTRICAL CHARACTERISTICS @ 25°C

Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
Pout	Output Power	Pin=11.2W Freq=2450 MHz	150	160		W
Gp	Power Gain	Pin=11.2W Freq=2450 MHz	11	11.6		dB
ηd	Drain Efficiency	Pin=11.2W Freq=2450MHz	50	55		%
RL	Return loss	Pin=11.2W Freq=2450 MHz			-8	dB

- **Bias Condition: Vdd=+48V, Idq=50mA constant current (Vgs= -2.0 ~ -4.5V typical)**

FUNCTIONAL CHARACTERISTICS @ 25°C

$I_{D(Off)}$	Drain leakage current	V_{gS} = -8V, V_D = 50V			16	mA
$I_{G(Off)}$	Gate leakage current	V_{gS} = -8V, V_D = 0V			8.4	mA
BV_{DSS}	Drain-source breakdown voltage	V_{gs} =-8V, I_D = 16mA	150			V

Export Classification: TBD

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TYPICAL BROAD BAND PERFORMACE DATA

Frequency	Pin (W)	Pout (W)	Id (A)	RL (dB)	η_D (%)	Gain (dB)	Droop (dB)
2430 MHz	11.2	165	6.14	-18	54	11.68	0
2460 MHz	11.2	164	6.13	-14	55	11.65	0
2490 MHz	11.2	158	5.90	-11	54	11.49	0

TEST CIRCUIT DIAGRAM

Please contact us for the test circuit

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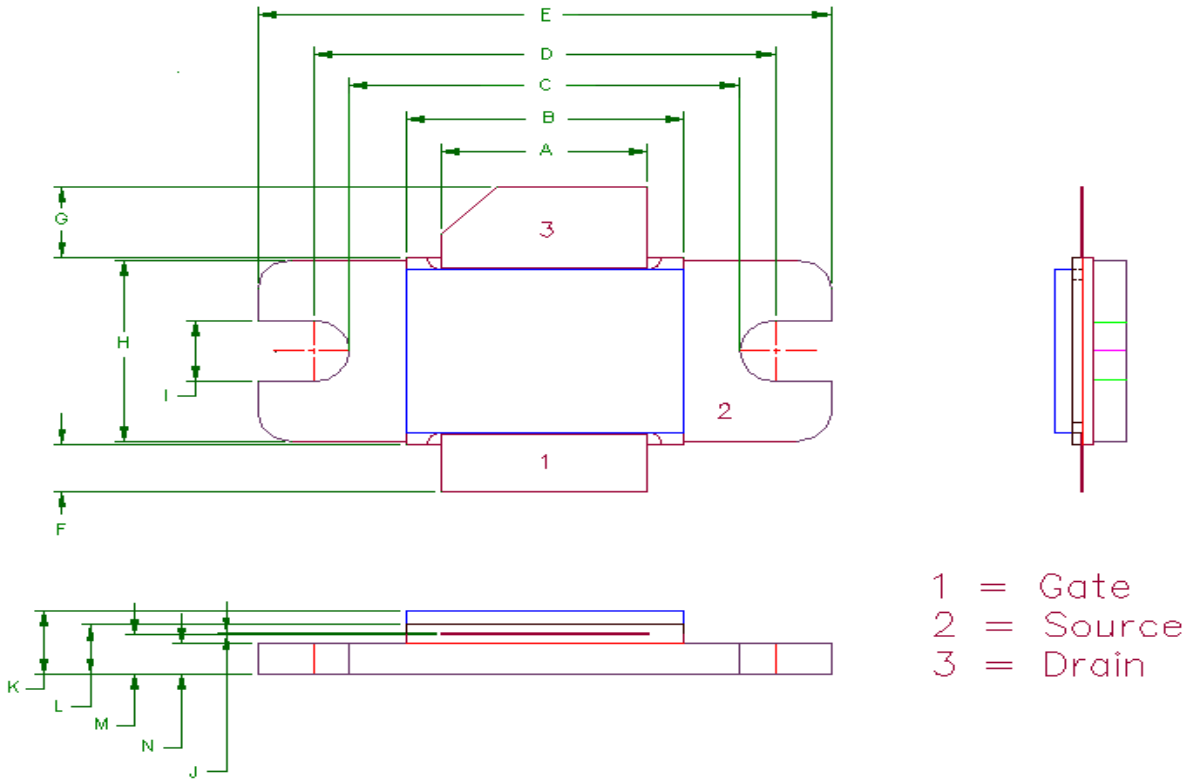
55-KR PACKAGE DIMENSION



Dimension	Min (mil)	Min (mm)	Max (mil)	Max (mm)
A	370	9.40	372	9.44
B	498	12.65	500	12.7
C	700	17.78	702	17.83
D	830	21.08	832	21.13
E	1030	26.16	1032	26.21
F	101	2.56	102	2.59
G	151	3.84	152	3.86
H	385	9.78	387	9.83
I	130	3.30	132	3.35
J	003	.076	004	0.10
K	135	3.43	137	3.48
L	105	2.67	107	2.72
M	085	2.16	86	2.18
N	065	1.65	66	1.68

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Revision History

Revision Level / Date	Para. Affected	Description
0.1 / April 8, 2014	-	Initial Preliminary Release