

CCSPG1060N

**N-CH GALLIUM NITRIDE
FIELD EFFECT TRANSISTOR
60 AMP, 100 VOLT**

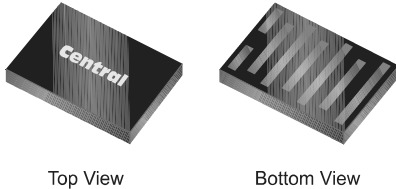


www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CCSPG1060N is an N-channel gallium nitride field effect transistor designed for use in EV charging stations, microinverters, and highly efficient fast-charging power blocks.

MARKING: CSP 1060



CSP3.5X2 CASE

MAXIMUM RATINGS: ($T_J=25^{\circ}\text{C}$)

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current
Pulsed Drain Current ($t_p=300\mu\text{s}$)
Power Dissipation ($T_A=25^{\circ}\text{C}$)
Operating and Storage Junction Temperature

SYMBOL

V_{DS} 100
 V_{GS} -4.0 to +6.0
 I_D 60
 I_{DM} 230
 P_D 1.1
 T_J, T_{stg} -40 to +150

UNITS

V
V
A
A
W
 $^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS: ($T_J=25^{\circ}\text{C}$ unless otherwise noted)

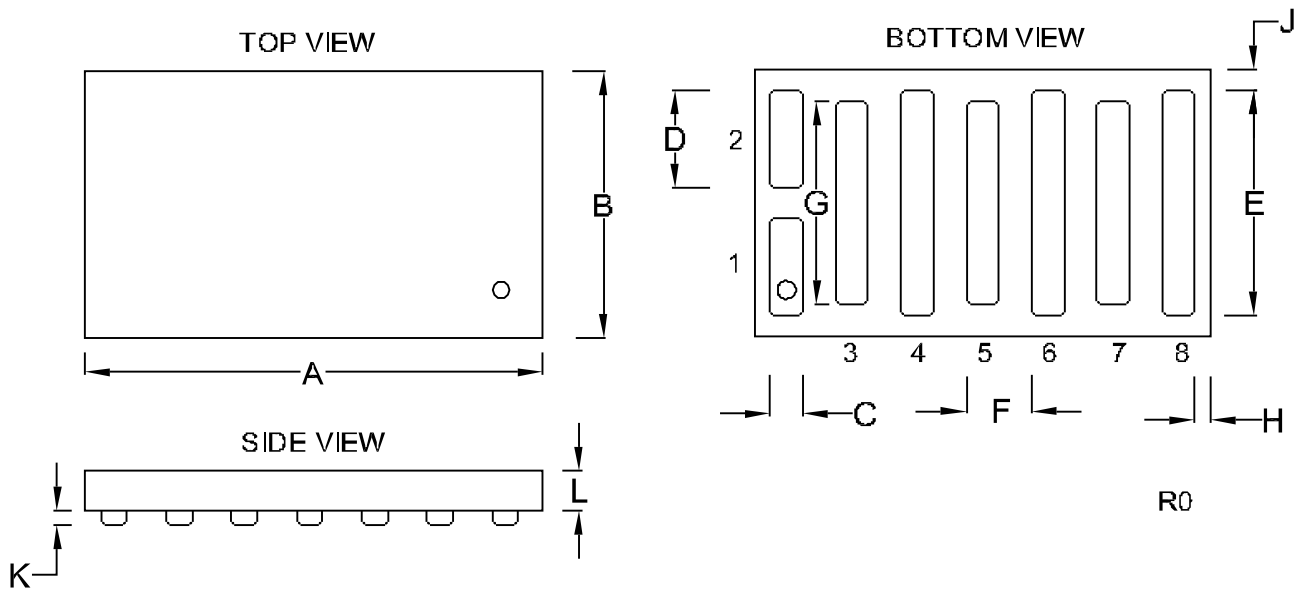
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}	$V_{GS}=5.0\text{V}, V_{DS}=0$		20	5000	μA
I_{GSSR}	$V_{GS}=4.0\text{V}, V_{DS}=0$		60	400	μA
I_{DSS}	$V_{DS}=80\text{V}, V_{GS}=0$			350	μA
BV_{DSS}	$V_{GS}=0, I_D=400\mu\text{A}$	100			V
$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=9.0\text{mA}$	0.8	1.1	2.5	V
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=25\text{A}$		2.4	5.5	$\text{m}\Omega$
V_{FSD}	$V_{GS}=0, I_S=0.5\text{A}$		2.3		V
C_{iss}	$V_{DS}=50\text{V}, V_{GS}=0, f=1\text{MHz}$		1000		pF
C_{oss}	$V_{DS}=50\text{V}, V_{GS}=0, f=1\text{MHz}$		460		pF
C_{rss}	$V_{DS}=50\text{V}, V_{GS}=0, f=1\text{MHz}$		8.2		pF
$C_{oss(er)}$	$V_{DS}=0$ to 50V, $V_{GS}=0$		700		pF
$C_{oss(tr)}$	$V_{DS}=0$ to 50V, $V_{GS}=0$		1020		pF
Q_g	$V_{DS}=50\text{V}, V_{GS}=0$ to 5V, $I_D=25\text{A}$		9.2		nC
Q_{gd}	$V_{DS}=50\text{V}, V_{GS}=0$ to 5V, $I_D=25\text{A}$		1.9		nC
Q_{gs}	$V_{DS}=50\text{V}, V_{GS}=0$ to 5V, $I_D=25\text{A}$		1.7		nC

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CSP3.5X2 CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.137	0.139	3.47	3.53
B	0.083	0.085	2.10	2.16
C	0.009	0.011	0.23	0.27
D	0.030	0.031	0.75	0.80
E	0.070	0.072	1.78	1.82
F	0.020		0.50	
G	0.063	0.065	1.60	1.65
H	0.005		0.125	
J	0.006		0.165	
K	0.004	0.006	0.10	0.14
L	0.011	0.013	0.29	0.33

CSP3.5X2 (REV: R0)

LEAD CODE:

- 1) Gate
- 2) Source
- 3) Drain
- 4) Source
- 5) Drain
- 6) Source
- 7) Drain
- 8) Source

MARKING:
CSP 1060

R1 (10-October 2023)

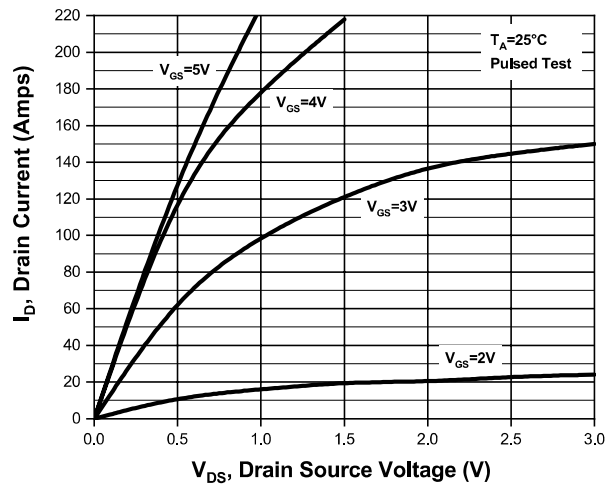
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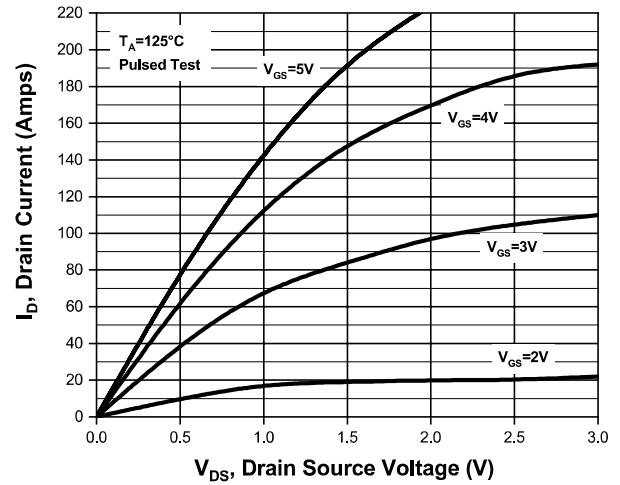


TYPICAL ELECTRICAL CHARACTERISTICS

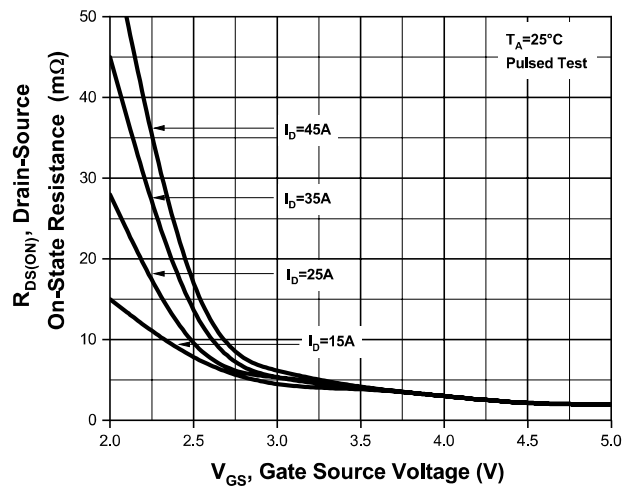
Typical Output Characteristics



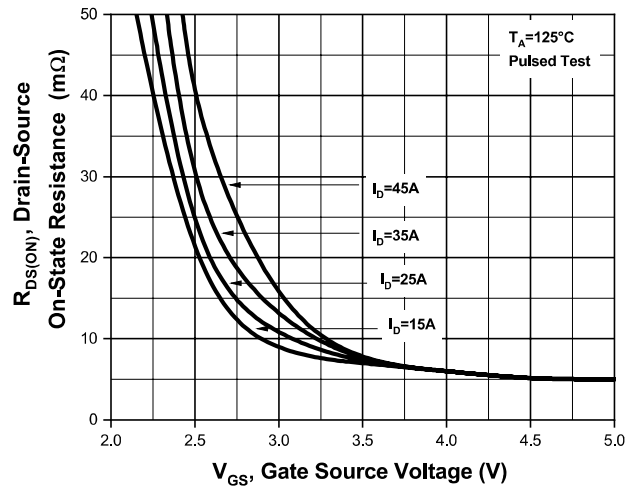
Typical Output Characteristics



Drain Source On Resistance



Drain Source On Resistance



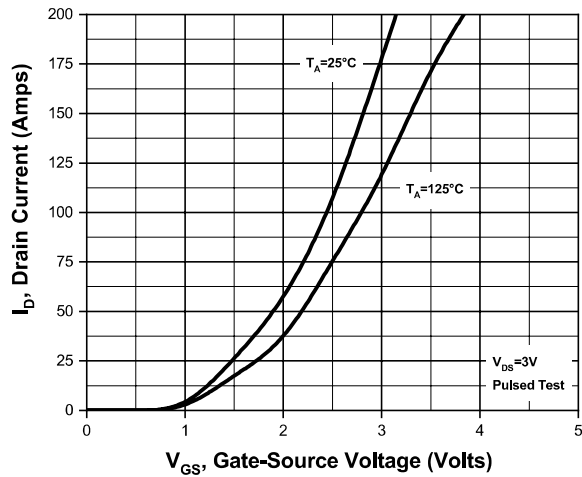
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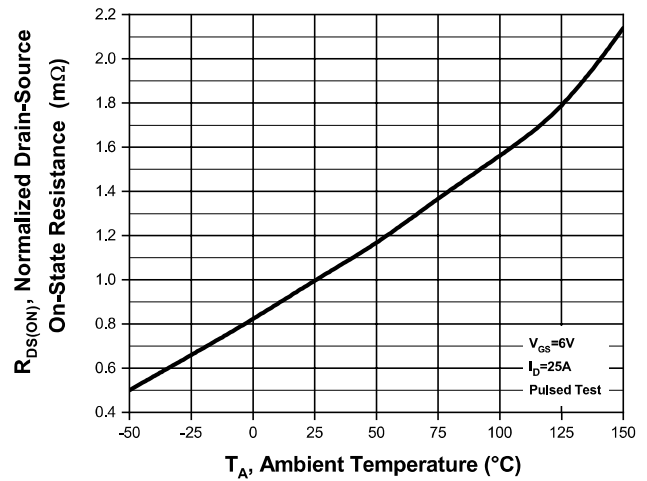


TYPICAL ELECTRICAL CHARACTERISTICS

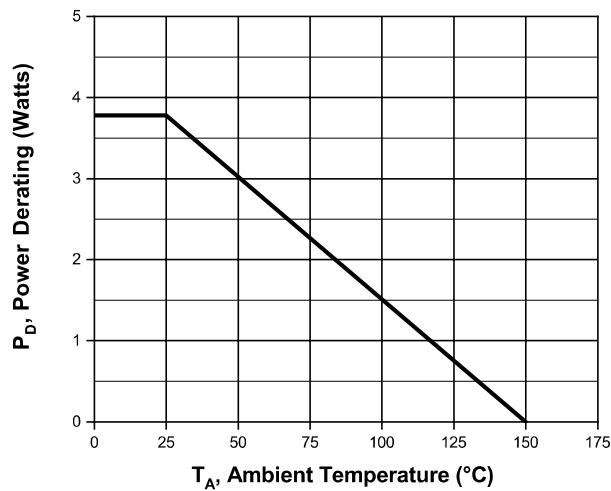
Transfer Characteristics



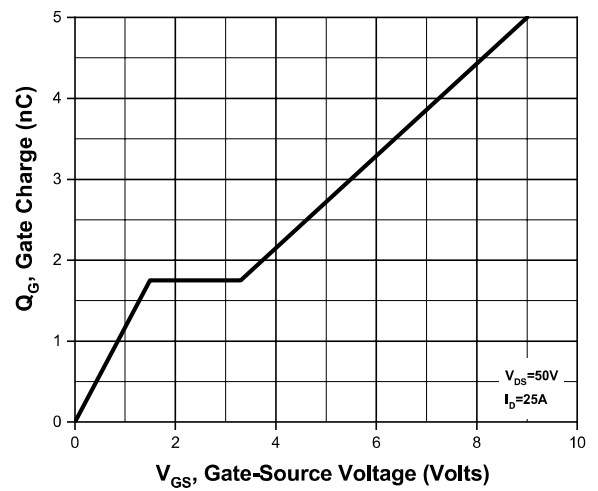
Drain Source Temperature Coefficient



Power Derating



Gate Capacitance Charge



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TYPICAL ELECTRICAL CHARACTERISTICS

