

CCSPG1560N

SURFACE MOUNT GaN  
N-CHANNEL  
POWER FET

60 AMP, 150 VOLT

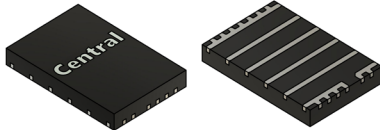
**Central**  
Semiconductor

[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CCSPG1560N 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: CEN CSP 1560 L/C D/C**



CSP4X6 CASE

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

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

SYMBOL		UNITS
$V_{DS}$	150	V
$V_{GS}$	-4.0 to 6.0	V
$I_D$	60	A
$P_D$	0.2	W
$T_J, T_{stg}$	-40 to +150	$^\circ\text{C}$

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

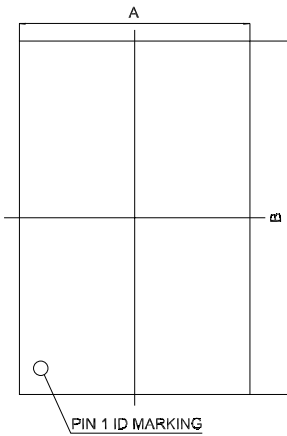
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{GSSF}$	$V_{GS}=5.0\text{V}$		1.5	100	$\mu\text{A}$
$I_{GSSF}$	$V_{GS}=6.0\text{V}$		4.0	1000	$\mu\text{A}$
$I_{GSSR}$	$V_{GS}=-4.0\text{V}$		0.1	100	$\mu\text{A}$
$I_{DSS}$	$V_{DS}=150\text{V}, V_{GS}=0\text{V}$		1.5	150	$\mu\text{A}$
$BV_{DSS}$	$V_{GS}=0\text{V}, I_D=500\mu\text{A}$	150			V
$V_{gs(th)}$	$V_{GS}=V_{DS}, I_D=7\text{mA}$	0.8	1.1	2.1	V
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=20\text{A}$		5.4	7.0	$\text{m}\Omega$
$V_{SD}$	$V_{GS}=0\text{V}, I_S=0.5\text{A}$		1.5		V
$C_{iss}$	$V_{DS}=75\text{V}, V_{GS}=0\text{V}$		1450		pF
$C_{oss}$	$V_{DS}=75\text{V}, V_{GS}=0\text{V}$		525		pF
$C_{rss}$	$V_{DS}=75\text{V}, V_{GS}=0\text{V}$		7.0		pF
$C_{oss(er)}$	$V_{DS}=0$ to 75V, $V_{GS}=0\text{V}$		740		pF
$C_{oss(tr)}$	$V_{DS}=0$ to 75V, $V_{GS}=0\text{V}$		1000		pF
$R_g$	$f=5\text{MHz}$		2		$\Omega$
$Q_g$	$V_{DS}=75\text{V}, V_{GS}=5.0\text{V}, I_D=20\text{A}$		13		nC
$Q_{gd}$	$V_{DS}=75\text{V}, I_D=20\text{A}$		2.0		nC
$Q_{gs}$	$V_{DS}=75\text{V}, I_D=20\text{A}$		3.0		nC
$Q_{g(th)}$	$V_{DS}=75\text{V}, I_D=20\text{A}$		1.5		nC
$Q_{oss}$	$V_{DS}=75\text{V}, V_{GS}=0\text{V}$		75		nC

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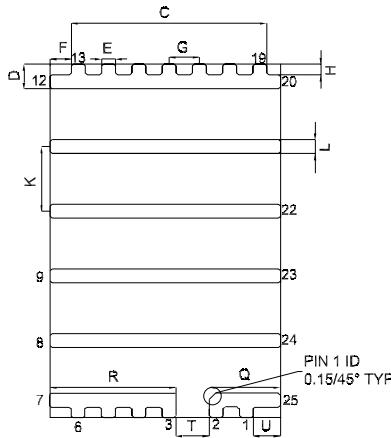


**CSP4X6 CASE - MECHANICAL OUTLINE**

TOP VIEW



BOTTOM VIEW



SIDE VIEW



R1

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.154	0.161	3.90	4.10
B	0.232	0.240	5.90	6.10
C	0.124	0.132	3.15	3.35
D	0.014	0.022	0.35	0.55
E	0.008	0.012	0.20	0.30
F	0.015		0.375	
G	0.020		0.50	
H	0.008		0.20	
K	0.042		1.07	
L	0.008	0.012	0.20	0.30
Q	0.043	0.051	1.10	1.30
R	0.083	0.091	2.10	2.30
T	0.022	0.026	0.55	0.65
U	0.018		0.45	
Z	0.008		0.203	
AA	0.030	0.037	0.75	0.95
AB	0.000	0.002	0.00	0.05

CSP4X6 (REV:R1)

**LEAD CODE:**

Gate = 1, 2, 25

Source = 3-7, 9, 11, 21, 23

Drain= 8, 10, 12-20, 22, 24

**MARKING: CEN CSP 1560 L/C**

**D/C**

R3 (24-July 2024)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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