

CCSPG1510N

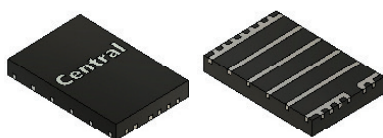
SURFACE MOUNT GaN
N-CHANNEL
POWER FET

100 AMP, 150 VOLT

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CCSPG1510N 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 1510 L/C D/C



CSP4X6 CASE

MAXIMUM RATINGS: (T_J=25°C)

	SYMBOL		UNITS
Drain-Source Voltage	V _{DS}	150	V
Gate-Source Voltage	V _{GS}	-4.0 to 6.0	V
Continuous Drain Current	I _D	100	A
Power Dissipation (T _A =25°C)	P _D	0.2	W
Operating and Storage Junction Temperature	T _J , T _{stg}	-40 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_J=25°C unless otherwise noted)

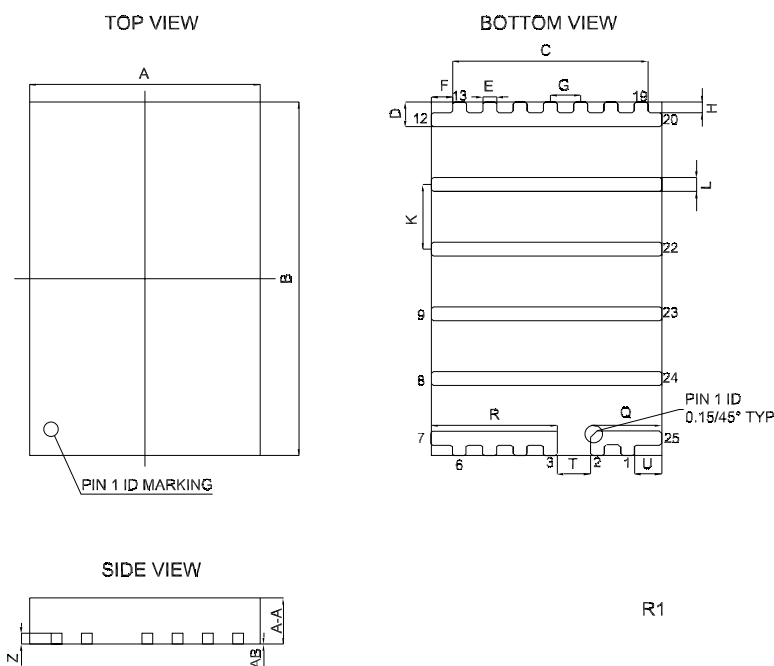
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{GSSF}	V _{GS} =5.0V		2.0	100	μA
I _{GSSF}	V _{GS} =6.0V		6.0	1000	μA
I _{GSSR}	V _{GS} =-4.0V		0.1	100	μA
I _{DSS}	V _{DS} =150V, V _{GS} =0V		2.0	150	μA
BV _{DSS}	V _{GS} =0V, I _D =500μA	150			V
V _{GS(th)}	V _{GS} = V _{DS} , I _D =12mA	0.8	1.1	2.1	V
r _{DS(ON)}	V _{GS} =5.0V, I _D =30A		3.2	3.9	mΩ
V _{SD}	V _{GS} =0V, I _S =0.5A		1.5		V
C _{iss}	V _{DS} =75V, V _{GS} =0V		2200		pF
C _{oss}	V _{DS} =75V, V _{GS} =0V		900		pF
C _{rss}	V _{DS} =75V, V _{GS} =0V		10.5		pF
C _{oss(er)}	V _{DS} =0 to 75V, V _{GS} =0V		1300		pF
C _{oss(tr)}	V _{DS} =0 to 75V, V _{GS} =0V		1700		pF
R _g	f=5MHz		2		Ω
Q _g	V _{DS} =75V, V _{GS} =5.0V, I _D =30A		20		nC
Q _{gd}	V _{DS} =75V, I _D =30A		3.5		nC
Q _{gs}	V _{DS} =75V, I _D =30A		5.0		nC
Q _{gd(th)}	V _{DS} =75V, I _D =30A		3.0		nC
Q _{oss}	V _{DS} =75V, V _{GS} =0V		130		nC

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CSP4X6 CASE - MECHANICAL OUTLINE



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 1510 L/C

D/C

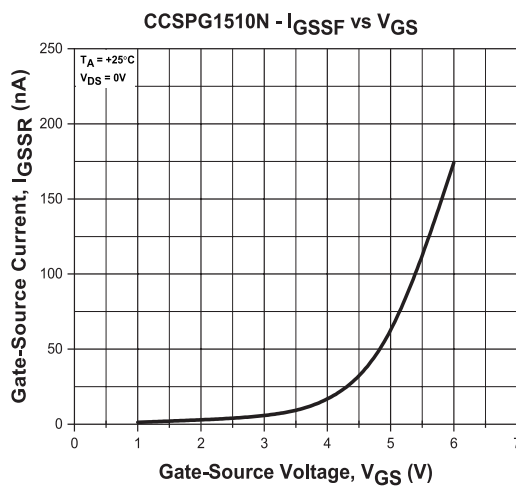
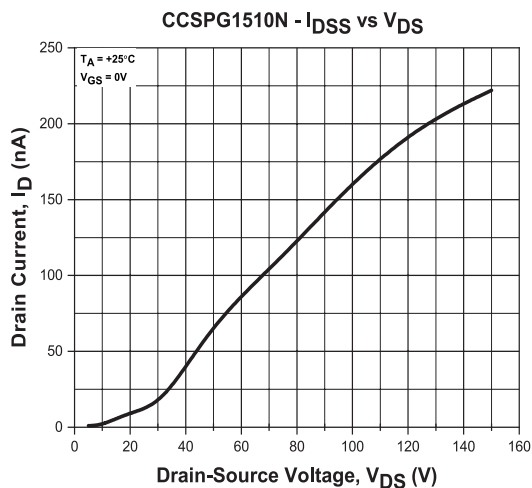
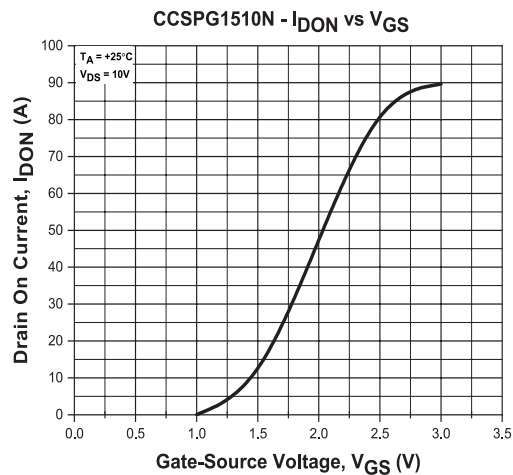
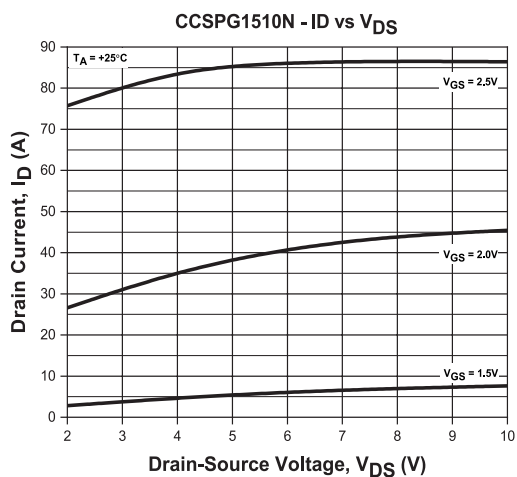
R4 (13-January 2026)

CCSPG1510N

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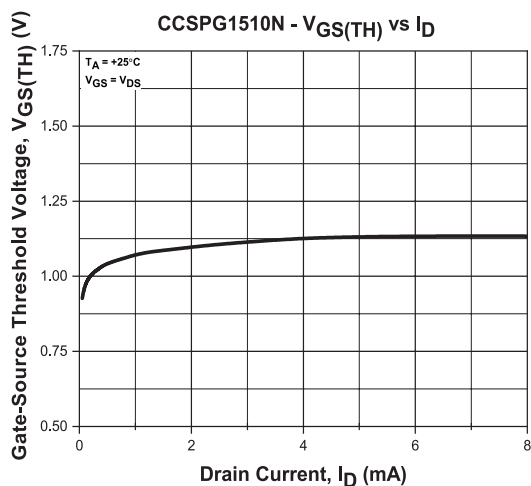
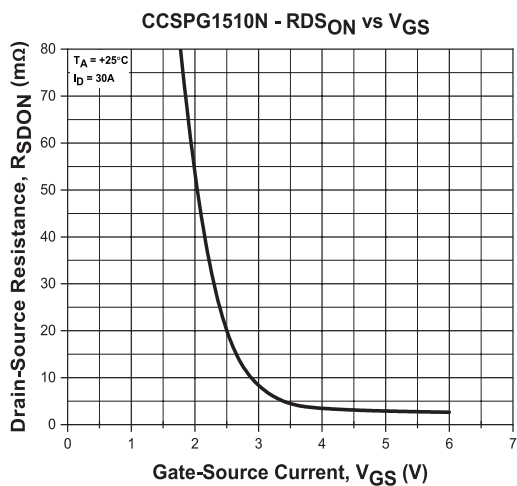
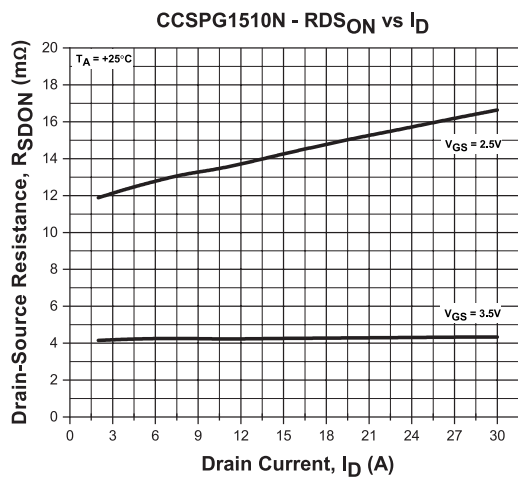
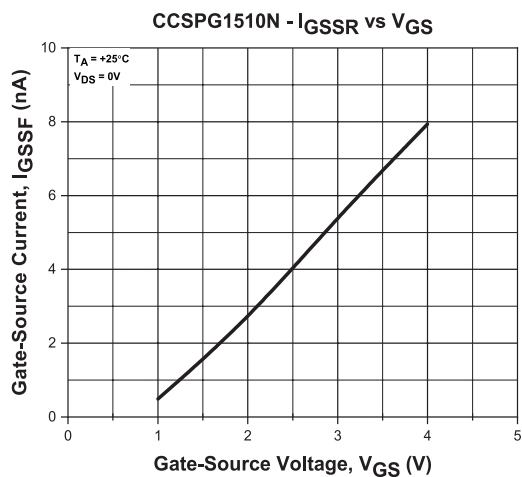
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TYPICAL ELECTRICAL CHARACTERISTICS



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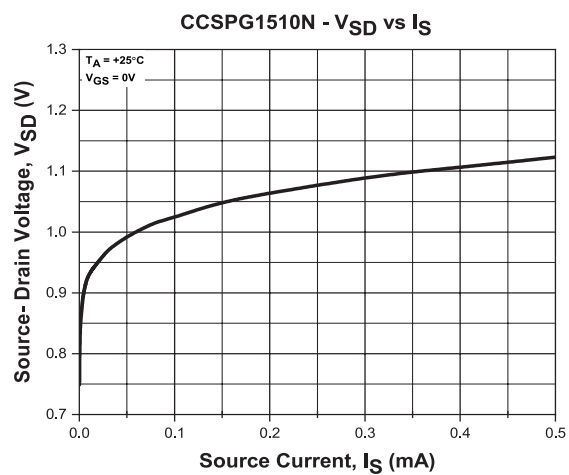


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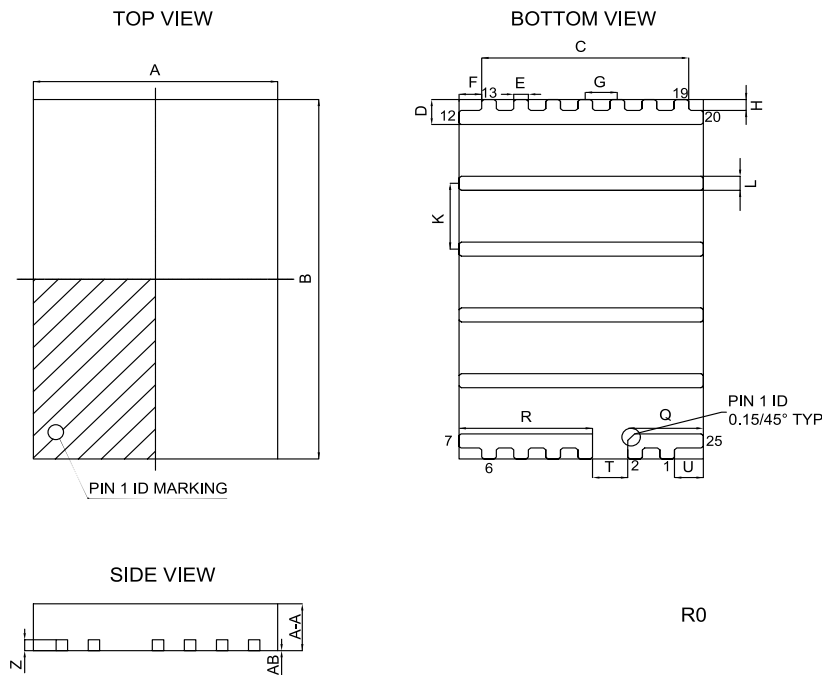


Package Details

CSP4X6 Case



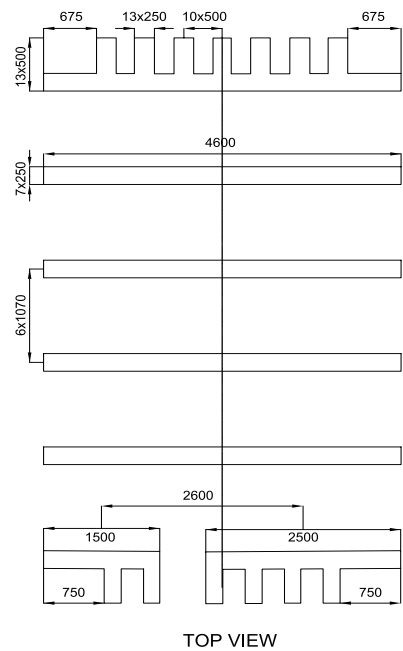
Mechanical Drawing



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.154	0.161	3.90	4.10
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CSP4X6 (REV:R0)

Mounting Pad Geometry (Dimensions in μm)



R0 (20-February 2024)

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