

CSICD05-1200

**SURFACE MOUNT  
SILICON CARBIDE  
SCHOTTKY RECTIFIER  
5.0 AMP, 1200 VOLT**



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CSICD05-1200 is a silicon carbide Schottky rectifier designed for high frequency systems where energy efficiency and thermal performance are critical design elements.

**MARKING CODE: SICD0512**



**DPAK-2L Case**

**APPLICATIONS:**

- Power inverters
- Motor drives
- Switch-mode power supplies
- Power factor correction

**FEATURES:**

- Low profile package
- Low switching loss
- Stable switching over temperature extremes

**MAXIMUM RATINGS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

	<b>SYMBOL</b>		<b>UNITS</b>
Peak Repetitive Reverse Voltage	$V_{RRM}$	1200	V
Peak Reverse Surge Voltage	$V_{RSM}$	1200	V
DC Blocking Voltage	$V_R$	1200	V
Average Rectified Forward Current ( $T_C=151^\circ\text{C}$ )	$I_O$	5.0	A
Continuous Forward Current ( $T_C=151^\circ\text{C}$ )	$I_F$	5.0	A
Peak Forward Surge Current, $t_p=10\text{ms}$	$I_{FSM}$	37.5	A
Single Pulse Avalanche Energy (Note 1)	$E_{AS}$	44	mJ
Power Dissipation	$P_D$	150	W
Power Dissipation ( $T_C=151^\circ\text{C}$ )	$P_D$	42	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-55 to +175	$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	1.6	$^\circ\text{C/W}$

Note 1:  $L=10\text{mH}$ ,  $I_{PK}=2.9\text{A}$ ,  $V_{DD}=100\text{V}$ , Initial  $T_J=25^\circ\text{C}$

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

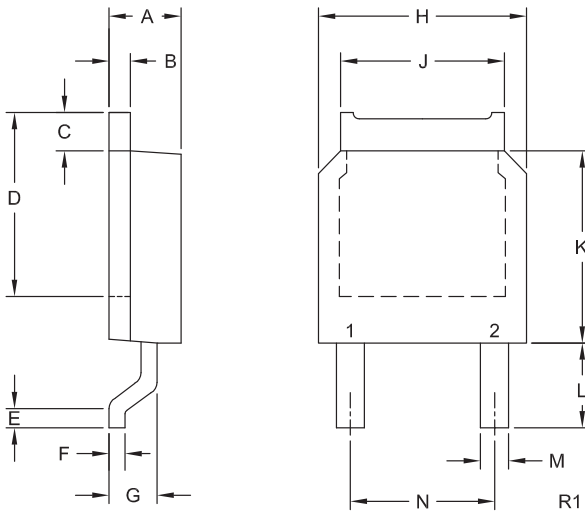
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
$I_R$	$V_R=1200\text{V}$	30	190	$\mu\text{A}$
$V_F$	$I_F=5.0\text{A}$	1.5	1.7	V
$V_F$	$I_F=5.0\text{A}$ , $T_J=175^\circ\text{C}$	2.5	3.0	V
$Q_C$	$V_R=800\text{V}$	26		nC
$C_J$	$V_R=1.0\text{V}$ , $f=1.0\text{MHz}$	260		pF
$C_J$	$V_R=400\text{V}$ , $f=1.0\text{MHz}$	24		pF
$C_J$	$V_R=800\text{V}$ , $f=1.0\text{MHz}$	19		pF

R2 (12-October 2017)

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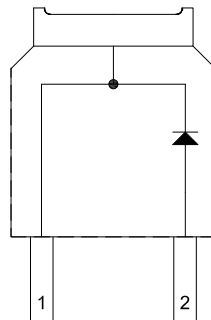
**DPAK-2L CASE - MECHANICAL OUTLINE**



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.080	0.100	2.03	2.54
B	0.018	0.035	0.46	0.89
C	0.035	0.050	0.89	1.27
D	0.230		5.84	
E	0.021	0.027	0.53	0.69
F	0.015	0.025	0.38	0.64
G	0.051	0.071	1.30	1.80
H	0.250	0.270	6.35	6.86
J	0.195	0.215	4.95	5.46
K	0.230	0.250	5.84	6.35
L	0.087	0.118	2.21	3.00
M	0.025	0.045	0.64	1.14
N	0.180		4.57	

DPAK-2L (REV: R1)

**PIN CONFIGURATION**



**LEAD CODE:**

- 1) Cathode
- 2) Anode
- Tab) Cathode

**MARKING CODE: SICD0512**

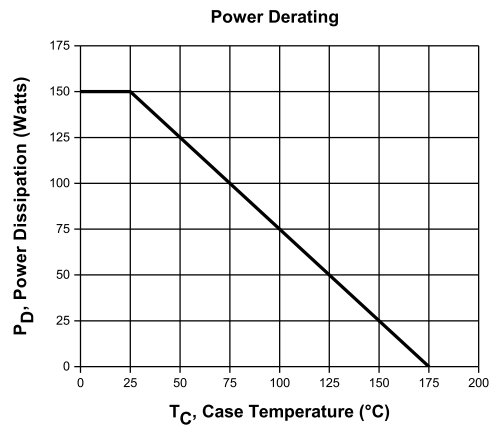
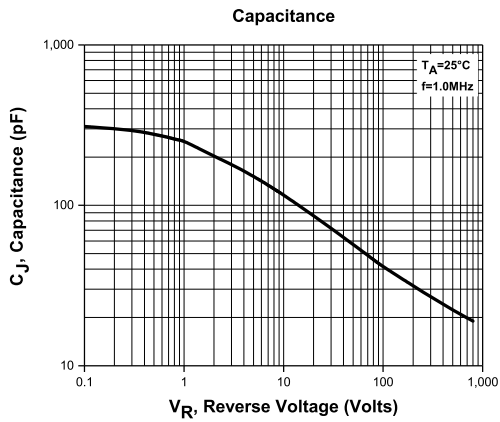
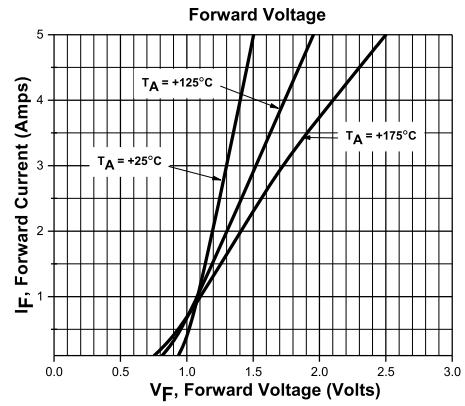
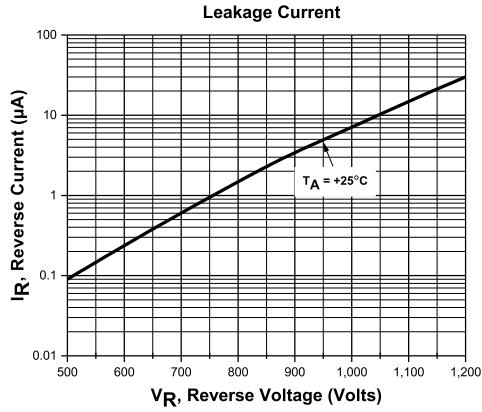
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### TYPICAL ELECTRICAL CHARACTERISTICS



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