

**CSIC10-1200****SILICON CARBIDE  
SCHOTTKY RECTIFIER  
10 AMP, 1200 VOLT**[www.centrasemi.com](http://www.centrasemi.com)**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CSIC10-1200 is a silicon carbide Schottky rectifier designed for high frequency systems where energy efficiency and thermal performance are critical design elements.

**MARKING: FULL PART NUMBER****TO-220-2 CASE****FEATURES:**

- Positive temperature coefficient
- High reverse voltage
- High operating temperature (175°C MAX)
- Stable switching over temperature extremes

**APPLICATIONS:**

- Power inverters
- Industrial motor drives
- Switch-mode power supplies
- Power factor correction
- Over-current protection

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

	SYMBOL		UNITS
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 ( $T_C=130^\circ\text{C}$ )	$I_O$	10	A
Continuous Forward Current ( $T_C=130^\circ\text{C}$ )	$I_F$	14	A
Peak Forward Surge Current, $t_p=8.3\text{ms}$	$I_{FSM}$	50	A
Power Dissipation	$P_D$	150	W
Power Dissipation ( $T_C=130^\circ\text{C}$ )	$P_D$	42	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-55 to +175	$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	1.0	$^\circ\text{C/W}$

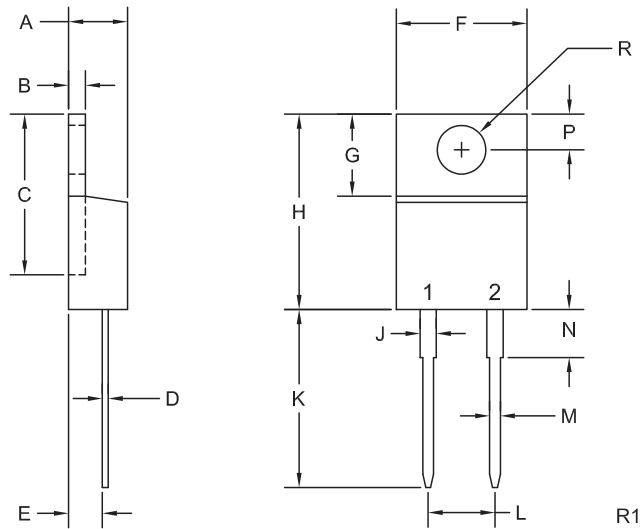
**ELECTRICAL CHARACTERISTICS:** ( $T_J=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT
$I_R$	$V_R=1200\text{V}$	60	400	$\mu\text{A}$
$I_R$	$V_R=1200\text{V}, T_J=175^\circ\text{C}$	0.09	1.0	mA
$V_F$	$I_F=10\text{A}$	1.55	1.8	V
$V_F$	$I_F=10\text{A}, T_J=175^\circ\text{C}$	2.3	3.0	V
$Q_C$	$V_R=800\text{V}, I_F=10\text{A}, di/dt=750\text{A}/\mu\text{s}$	54		nC
$C_J$	$V_R=1.0\text{V}, f=1.0\text{MHz}$	477		pF
$C_J$	$V_R=300\text{V}, f=1.0\text{MHz}$	50		pF
$C_J$	$V_R=600\text{V}, f=1.0\text{MHz}$	41		pF

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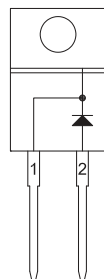
**TO-220-2 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Cathode
- 2) Anode
- Tab is Common to Pin 1

**MARKING: FULL PART NUMBER**



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.170	0.190	4.32	4.83
B	0.045	0.055	1.14	1.40
C	0.460	0.507	11.68	12.88
D	0.013	0.024	0.33	0.61
E	0.080	0.115	2.03	2.92
F	0.380	0.420	9.65	10.67
G	0.230	0.270	5.84	6.86
H	0.570	0.615	14.48	15.62
J	0.044	0.070	1.14	1.78
K	0.500	0.580	12.70	14.73
L	0.200		5.08	
M	0.025	0.036	0.64	0.91
N	0.120	0.240	3.05	6.10
P	0.100	0.120	2.54	3.05
R (DIA)	0.143	0.156	3.63	3.96

TO-220-2 (REV: R1)

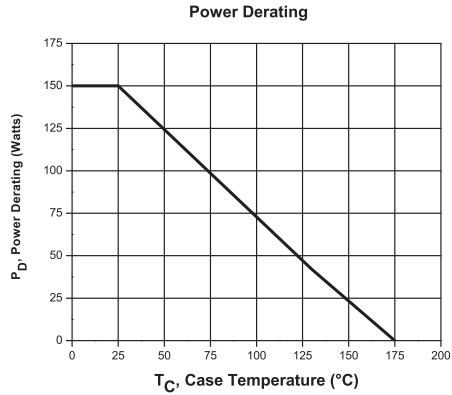
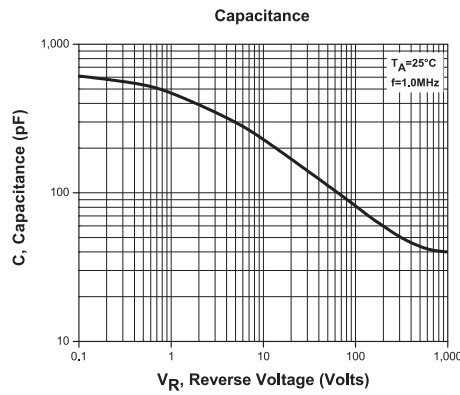
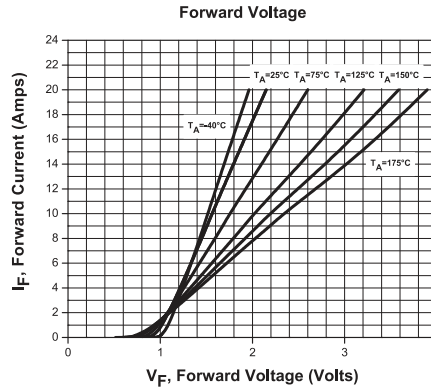
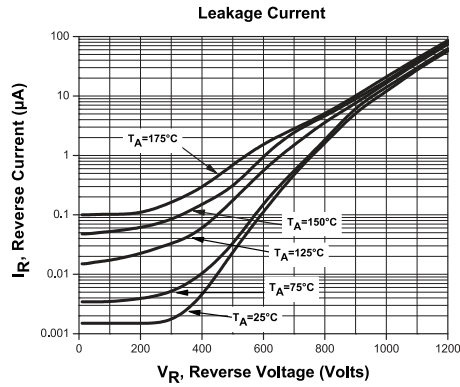
R2 (4-February 2013)

CSIC10-1200

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TYPICAL ELECTRICAL CHARACTERISTICS



R2 (4-February 2013)