

CSIC10-1200**SILICON CARBIDE
SCHOTTKY RECTIFIER
10 AMP, 1200 VOLT**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	θ_{JC}	1.0	$^\circ\text{C/W}$

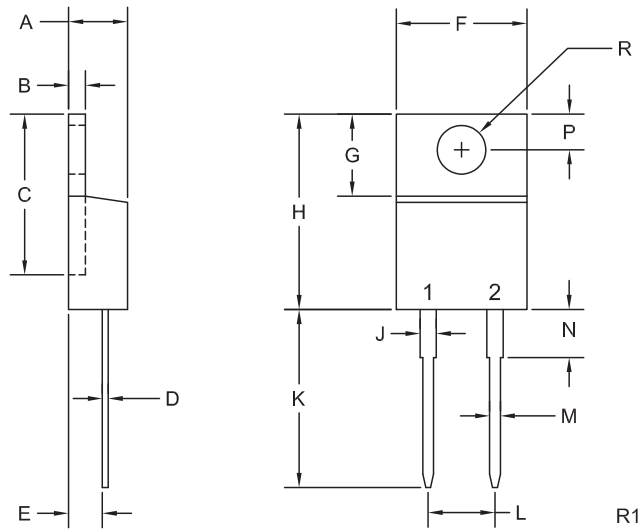
ELECTRICAL CHARACTERISTICS: ($T_J=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT
I_R	$V_R=1200\text{V}$	60	400	μA
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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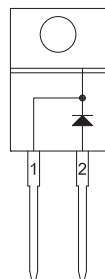
TO-220-2 CASE - MECHANICAL OUTLINE



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)

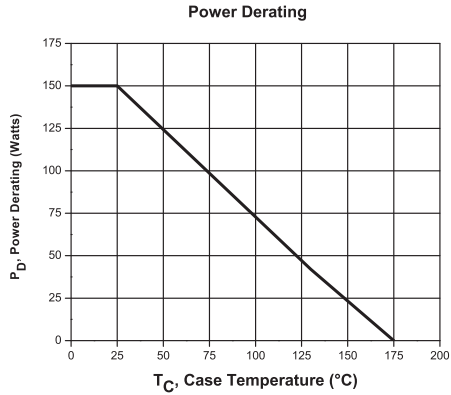
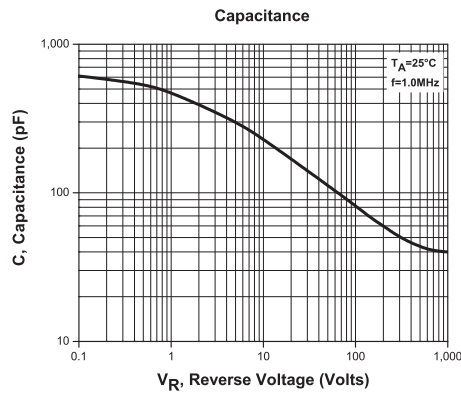
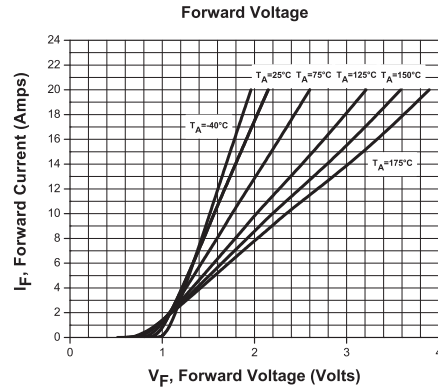
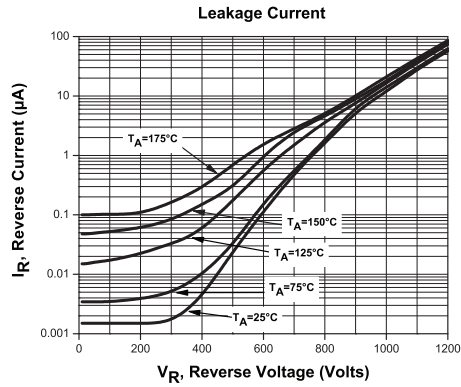
R2 (4-February 2013)

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TYPICAL ELECTRICAL CHARACTERISTICS



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