

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

APPLICATIONS:

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

FEATURES:

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

MAXIMUM RATINGS: (T_C=25°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 =142°C)	I _O	10	A
Continuous Forward Current (T _C =142°C)	I _F	14	A
Peak Forward Surge Current, tp=8.3ms	I _{FSM}	80	A
Power Dissipation	P _D	136	W
Power Dissipation (T _C =142°C)	P _D	30	W
Operating and Storage Junction Temperature	T _J , T _{stg}	-55 to +175	°C
Thermal Resistance	θ _{JC}	1.1	°C/W

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

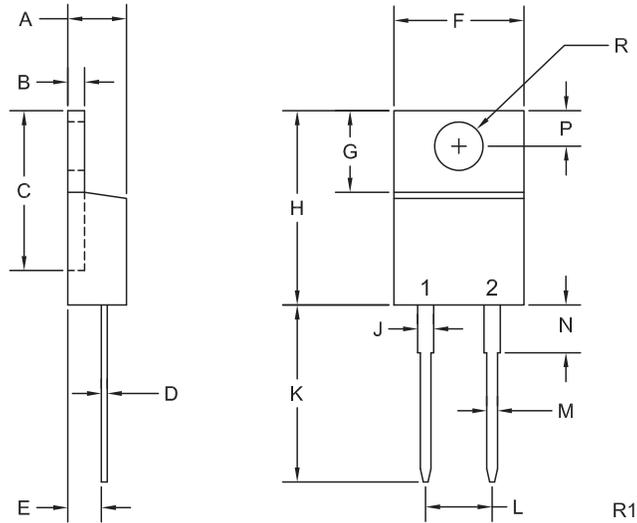
SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT
I _R	V _R =1200V	30	250	μA
I _R	V _R =1200V, T _J =175°C	60	800	μA
V _F	I _F =10A	1.5	1.7	V
V _F	I _F =10A, T _J =175°C	2.5	3.0	V
Q _C	V _R =600V, I _F =10A, di/dt=250A/μs	35		nC
C _J	V _R =1.0V, f=1.0MHz	500		pF
C _J	V _R =300V, f=1.0MHz	50		pF
C _J	V _R =600V, f=1.0MHz	36		pF

R3 (15-June 2016)

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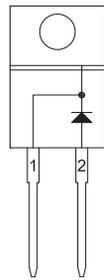
TO-220-2 CASE - MECHANICAL OUTLINE



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)

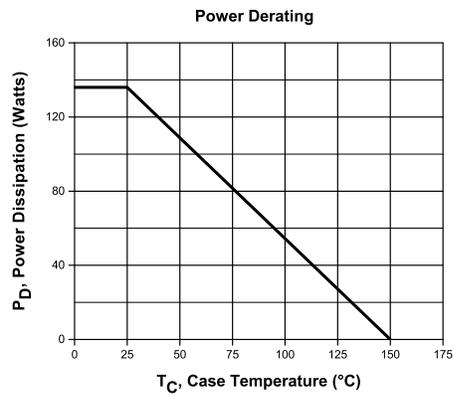
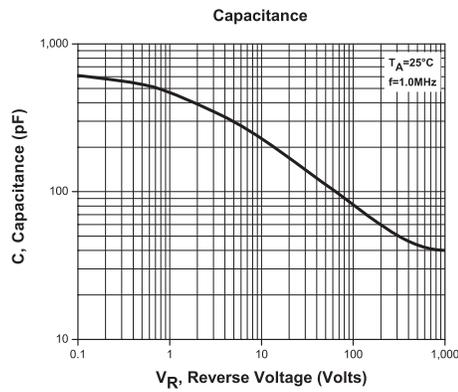
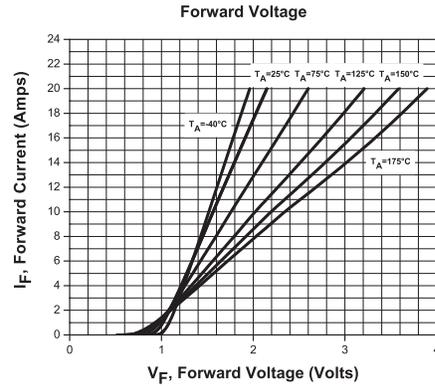
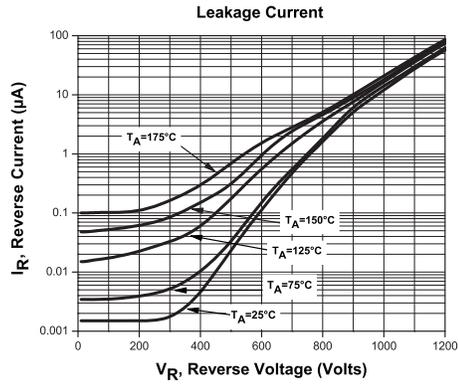
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TYPICAL ELECTRICAL CHARACTERISTICS



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

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

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- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

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- 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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