



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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CS220-12B
 CS220-12D
 CS220-12M
 CS220-12N
 CS220-12P

**SILICON CONTROLLED RECTIFIERS
 12 AMP, 200 THRU 1000 VOLT**

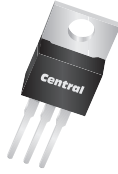


www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS220-12B series types are epoxy molded SCRs designed for sensing circuit and control system applications.

MARKING: FULL PART NUMBER



TO-220 CASE

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

	SYMBOL	CS220					UNITS
		-12B	-12D	-12M	-12N	-12P	
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	200	400	600	800	1000	V
RMS On-State Current ($T_C=90^\circ\text{C}$)	$I_T(\text{RMS})$			12			A
Peak One Cycle Surge Current, $t=10\text{ms}$	I_{TSM}			80			A
I^2t Value for Fusing, $t=10\text{ms}$	I^2t			32			A^2s
Peak Gate Power Dissipation, $t_p=10\mu\text{s}$	P_{GM}			40			W
Average Gate Power Dissipation	$P_{G(AV)}$			1.0			W
Peak Forward Gate Current, $t_p=10\mu\text{s}$	I_{FGM}			4.0			A
Peak Forward Gate Voltage, $t_p=10\mu\text{s}$	V_{FGM}			16			V
Peak Reverse Gate Voltage, $t_p=10\mu\text{s}$	V_{RGM}			5.0			V
Critical Rate of Rise of On-State Current	di/dt			100			$\text{A}/\mu\text{s}$
Operating Junction Temperature	T_J			-40 to +125			$^\circ\text{C}$
Storage Temperature	T_{stg}			-40 to +150			$^\circ\text{C}$
Thermal Resistance	θ_{JA}			60			$^\circ\text{C}/\text{W}$
Thermal Resistance	θ_{JC}			2.5			$^\circ\text{C}/\text{W}$

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

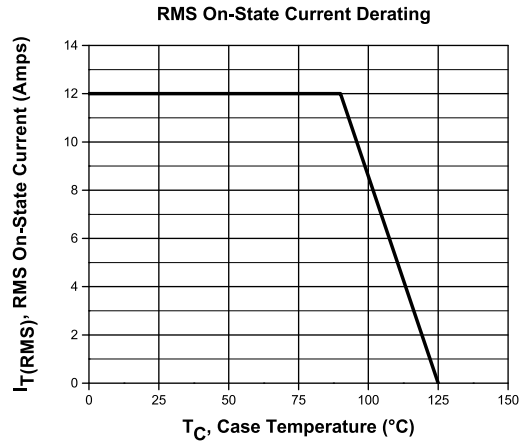
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}			10	μA
I_{DRM}, I_{RRM}	Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}$			3.0	mA
I_{GT}	$V_D=12\text{V}, R_L=10\Omega$		3.5	15	mA
I_H	$I_T=100\text{mA}$		8.7	20	mA
V_{GT}	$V_D=12\text{V}, R_L=10\Omega$		0.64	1.5	V
V_{TM}	$I_{TM}=24\text{A}, t_p=380\mu\text{s}$		1.21	1.6	V
dv/dt	$V_D=2/3\text{Rated } V_{DRM}, T_C=125^\circ\text{C}$	200			$\text{V}/\mu\text{s}$

CS220-12B
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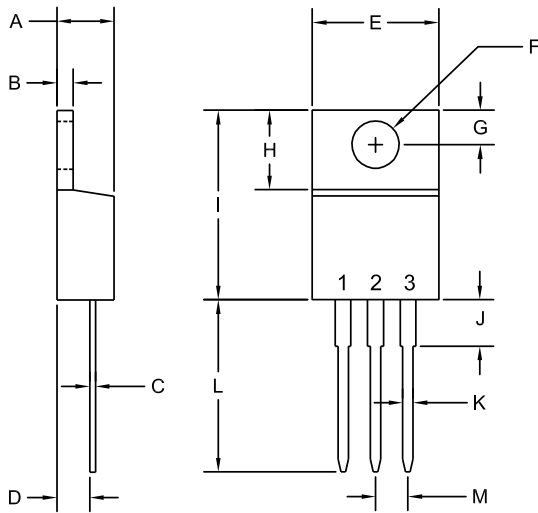
SILICON CONTROLLED RECTIFIERS
12 AMP, 200 THRU 1000 VOLT



TYPICAL ELECTRICAL CHARACTERISTICS



TO-220 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.170	0.190	4.31	4.82
B	0.045	0.055	1.15	1.39
C	0.013	0.026	0.33	0.65
D	0.083	0.107	2.10	2.72
E	0.394	0.417	10.01	10.60
F (DIA)	0.140	0.157	3.55	4.00
G	0.100	0.118	2.54	3.00
H	0.230	0.270	5.85	6.85
I	0.560	0.625	14.23	15.87
J	-	0.250	-	6.35
K	0.025	0.038	0.64	0.96
L	0.500	0.579	12.70	14.70
M	0.090	0.110	2.29	2.79

TO-220 (REV: R2)

LEAD CODE:

- 1) Cathode
- 2) Anode
- 3) Gate

Tab is common to pin 2

MARKING: FULL PART NUMBER

R6 (5-September 2014)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

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

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- 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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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centalsemi.com/terms

Product End of Life Notification

PDN ID:	PDN01051
Notification Date:	8/24/16
Last Buy Date:	2/24/17
Last Shipment Date	8/24/17

Summary: The CS220 series of Silicon Controlled Rectifiers in the TO-220 case is discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

Central Part Number	Replacement
CS220-10B	N/A
CS220-10D	N/A
CS220-10M	N/A
CS220-10N	N/A
CS220-12B	N/A
CS220-12D	N/A
CS220-12M	N/A
CS220-12N	N/A
CS220-12P	N/A
CS220-16B	N/A
CS220-16D	N/A
CS220-16M	N/A
CS220-16N	N/A
CS220-16P	N/A
CS220-25B	N/A
CS220-25D	N/A
CS220-25M	N/A
CS220-25N	N/A
CS220-25P	N/A
CS220-25PB	N/A
CS220-35M	N/A
CS220-35N	N/A
CS220-8B	N/A
CS220-8D	N/A
CS220-8F	N/A
CS220-8M	N/A
CS220-8N	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.