Central™
Semiconductor Corp.
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Manufacturers of World Class Discrete Semiconductors

CQ220-6BS
CQ220-6DS
CQ220-6MS
CQ220-6NS

6.0 AMP TRIAC
200 THRU 800 VOLTS

JEDEC TO-220AB CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ220-6BS series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

MAXIMUM RATINGS ($T_C = 25°C$ unless otherwise noted)

	SYMBOL	CQ220 -6BS	CQ220 -6DS	CQ220 -6MS	CQ220 -6NS	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	200	400	600	800	V
RMS On-State Current ($T_C = 90°C$)	$I_{T(RMS)}$		6.0			A
Peak One Cycle Surge (t = 10ms)	I_{TSM}		60			A
I^2t Value for Fusing (t = 10ms)	I^2t		18			A^2s
Peak Gate Power (tp = 10μs)	P_{GM}		40			W
Average Gate Power Dissipation	$P_{G(AV)}$		1.0			W
Peak Gate Current (tp = 10μs)	I_{GM}		4.0			A
Peak Gate Voltage (tp = 10μs)	V_{GM}		16			V
Critical Rate of Rise of On-State Current Repetitive (F = 50Hz)	di/dt		10			A/μs
Storage Temperature	T_{stg}		-40 to +150			°C
Junction Temperature	T_J		-40 to +110			°C
Thermal Resistance	Θ_{J-A}		60			°C/W
Thermal Resistance	Θ_{J-C}		3.2			°C/W

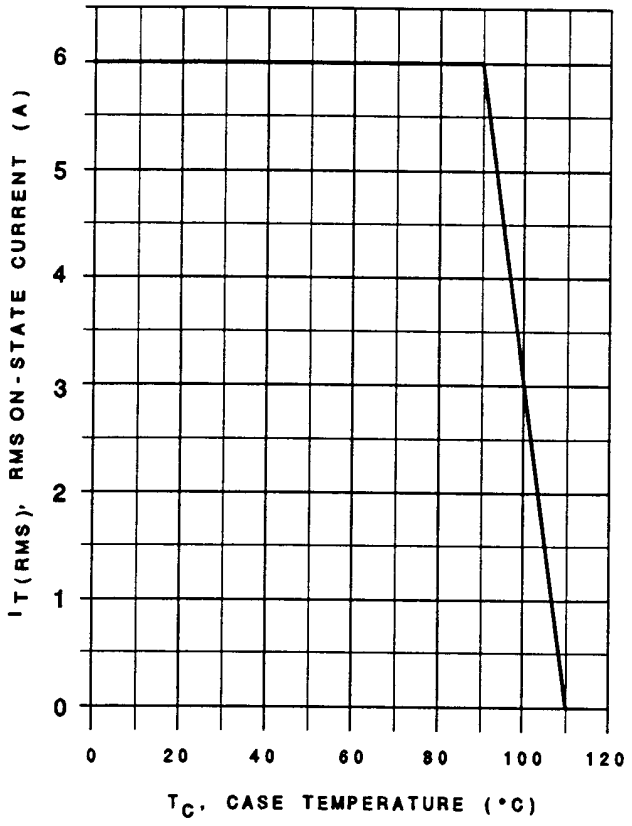
ELECTRICAL CHARACTERISTICS ($T_C = 25°C$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}	Rated V_{DRM}			0.01	mA
I_{DRM}	Rated V_{DRM}, $T_C = 110°C$			0.75	mA
I_{GT}	$V_D = 12V$, $R_L = 33\Omega$, QUAD I,II,III			5.0	mA
I_{GT}	$V_D = 12V$, $R_L = 33\Omega$, QUAD IV			10	mA
I_H	$I_T = 100mA$			15	mA
V_{GT}	$V_D = 12V$, $R_L = 33\Omega$, QUAD I,II,III,IV			1.50	V
V_{TM}	$I_{TM} = 8.5A$, tp = 10ms			1.65	V
dv/dt	$V_D = \frac{2}{3}V_{DRM}$, $R_{GK} = \infty$, $T_C = 110°C$		10		V/μs

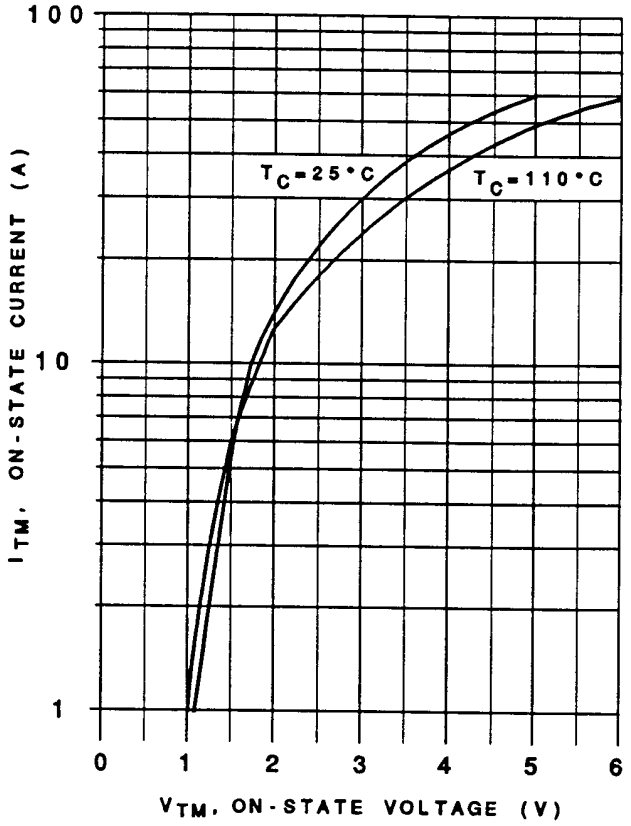
(OVER)

CQ220-6BS SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE

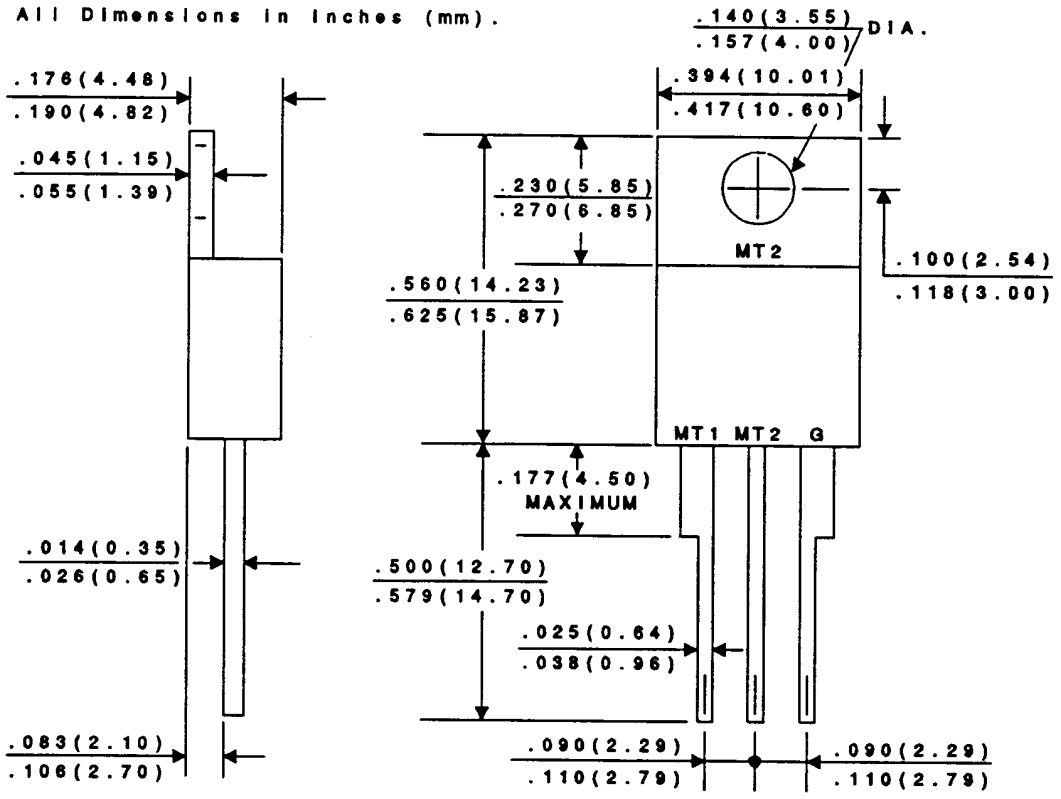


MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL DIMENSIONS

All Dimensions in Inches (mm).



Central Semiconductor Corp.

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

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

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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.centralsemi.com/terms

http://www.centralsemi.com

Product End of Life Notification

PDN ID:	PDN01054
Notification Date:	8/24/16
Last Buy Date:	2/24/17
Last Shipment Date	8/24/17

Summary:The CQ220 series of TRIACS 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	
CQ220-10B	N/A	
CQ220-10D	N/A	
CQ220-10M	N/A	
CQ220-10N	N/A	
CQ220-12B	N/A	
CQ220-12D	N/A	
CQ220-12M	N/A	
CQ220-12M SL	N/A	
CQ220-12MFP	N/A	
CQ220-12M3 SL	N/A	
CQ220-12N	N/A	
CQ220-16B	N/A	
CQ220-16D	N/A	
CQ220-16M	N/A	
CQ220-16M SL	N/A	
CQ220-16MFP	N/A	
CQ220-16N	N/A	
CQ220-25B	N/A	
CQ220-25D	N/A	
CQ220-25M	N/A	
CQ220-25MFP	N/A	
CQ220-25N	N/A	
CQ220-40M	N/A	
CQ220-40MFP	N/A	
CQ220-40N	N/A	
CQ220-40NFP	N/A	
CQ220-6BS	N/A	
CQ220-6D	N/A	
CQ220-6DS	N/A	
CQ220-6MS	N/A	
CQ220-6NS	N/A	
CQ220-8B	N/A	
CQ220-8B W/DC SL	N/A	
CQ220-8D	N/A	
CQ220-8DS	N/A	
CQ220-8M	CQ220-8M	H
CQ220-8MFP	N/A	
CQ220-8M3 SL	N/A	

*** CONTINUED ***

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.

Central Semiconductor Corp.

http://www.centralsemi.com

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*** CONTINUED FROM PRIOR PAGE ***

Central Part Number	Replacement
CQ220-8N	N/A
CQ220-8NR	N/A
CQ220I-10B	N/A
CQ220I-10D	N/A
CQ220I-10M	N/A
CQ220I-10N	N/A
CQ220I-100	N/A
CQ220I-12B	N/A
CQ220I-12D	N/A
CQ220I-12M	N/A
CQ220I-12N	N/A
CQ220I-16B	N/A
CQ220I-16D	N/A
CQ220I-16M	N/A
CQ220I-16N	N/A
CQ220I-6BS	N/A
CQ220I-6D	N/A
CQ220I-6DS	N/A
CQ220I-6MS	N/A
CQ220I-6NS	N/A
CQ220I-8B	N/A
CQ220I-8D	N/A
CQ220I-8DR	N/A
CQ220I-8M	N/A
CQ220I-8N	N/A
CQ220L-8DS	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.

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