

CQ92BT
CQ92DT
CQ92MT
CQ92NT

TRIAC
1.0 AMP, 200 THRU 800 VOLTS



TO-92 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CQ92BT Series are epoxy molded silicon Triacs designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

MARKING CODE: FULL PART NUMBER

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

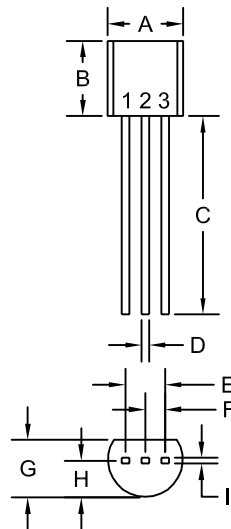
	SYMBOL	CQ92BT	CQ92DT	CQ92MT	CQ92NT	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	200	400	600	800	V
RMS On-State Current ($T_C=50^\circ\text{C}$)	$I_T(\text{RMS})$		1.0			A
Peak One Cycle Surge ($t=10\text{ms}$)	I_{TSM}		20			A
I^2t Value for Fusing ($t=10\text{ms}$)	I^2t		2.0			A^2s
Peak Gate Power ($t_p=10\mu\text{s}$)	P_{GM}		3.0			W
Average Gate Power Dissipation	$P_G(\text{AV})$		0.2			W
Peak Gate Current ($t_p=10\mu\text{s}$)	I_{GM}		1.2			A
Peak Gate Voltage ($t_p=10\mu\text{s}$)	V_{GM}		8.0			V
Storage Temperature	T_{stg}		-40 to +150			$^\circ\text{C}$
Junction Temperature	T_J		-40 to +125			$^\circ\text{C}$
Thermal Resistance	θ_{JA}		180			$^\circ\text{C/W}$
Thermal Resistance	θ_{JC}		90			$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{DRM}	Rated V_{DRM} , $R_{GK}=1\text{K}\Omega$		5.0	μA
I_{DRM}	Rated V_{DRM} , $R_{GK}=1\text{K}\Omega$, $T_C=125^\circ\text{C}$		200	μA
I_{GT}	$V_D=12\text{V}$, QUAD I, II, III, IV		3.0	mA
I_H	$I_T=100\text{mA}$, $R_{GK}=1\text{K}\Omega$		3.0	mA
V_{GT}	$V_D=12\text{V}$, QUAD I, II, III, IV		2.0	V
V_{TM}	$I_{TM}=1.2\text{A}$, $t_p=380\mu\text{s}$		1.26	V
dv/dt	$V_D=2/3 V_{DRM}$, $T_C=125^\circ\text{C}$	30		V/ μs

R0 (03-June 2004)

TO-92 CASE - MECHANICAL OUTLINE



R1

LEAD CODE:

- 1) MT1
- 2) GATE
- 3) MT2

MARKING CODE:

FULL PART NUMBER

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

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

CONTACT US

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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

Summary: The CQ92 series of TRIACS in the TO-92 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
CQ92-2M	N/A
CQ92-2N	N/A
CQ92B	N/A
CQ92BT	N/A
CQ92D	N/A
CQ92D APM	N/A
CQ92DT	N/A
CQ92M	N/A
CQ92MT	N/A
CQ92N	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@centrasemi.com.