

CQ92BT  
CQ92DT  
CQ92MT  
CQ92NT

TRIAC  
1.0 AMP, 200 THRU 800 VOLTS



TO-92 CASE

# Central<sup>TM</sup>

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)

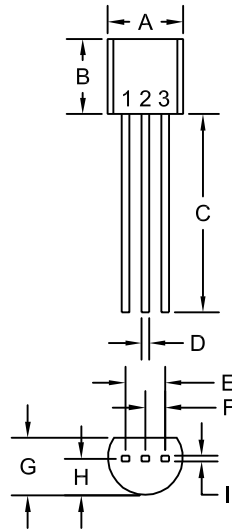
	SYMBOL	CQ92BT	CQ92DT	CQ92MT	CQ92NT	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}$	200	400	600	800	V
RMS On-State Current ( $T_C=50^\circ\text{C}$ )	$I_T(\text{RMS})$		1.0			A
Peak One Cycle Surge ( $t=10\text{ms}$ )	$I_{TSM}$		20			A
$I^2t$ Value for Fusing ( $t=10\text{ms}$ )	$I^2t$		2.0			$\text{A}^2\text{s}$
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	$\theta_{JA}$		180			$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JC}$		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	$\mu\text{A}$
$I_{DRM}$	Rated $V_{DRM}$ , $R_{GK}=1\text{K}\Omega$ , $T_C=125^\circ\text{C}$		200	$\mu\text{A}$
$I_{GT}$	$V_D=12\text{V}$ , 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/ $\mu\text{s}$

R0 (03-June 2004)

TO-92 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

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

**MARKING CODE:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	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)