

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)

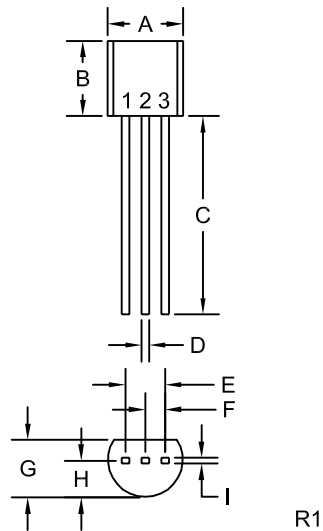
	SYMBOL	CQ92BT	CQ92DT	CQ92MT	CQ92NT	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	200	400	600	800	V
RMS On-State Current ($T_C=50^\circ\text{C}$)	$I_T(\text{RMS})$		1.0			A
Peak One Cycle Surge ($t=10\text{ms}$)	I_{TSM}		20			A
I^2t Value for Fusing ($t=10\text{ms}$)	I^2t		2.0			A^2s
Peak Gate Power ($t_p=10\mu\text{s}$)	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



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)