

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CQ220I-8B
CQ220I-8D
CQ220I-8M
CQ220I-8N

ISOLATED TAB TRIAC
8.0 AMP, 200 THRU 800 VOLTS

JEDEC TO-220AB CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ220I-8B series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants. This device is mounted in a TO-220 case with an isolated mounting tab.

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

	SYMBOL	CQ220I -8B	CQ220I -8D	CQ220I -8M	CQ220I -8N	UNITS
Peak Repetitive Off-State Voltage	V _{DRM}	200	400	600	800	V
RMS On-State Current (T _C = 90°C)	I _{T(RMS)}			8.0		A
Peak One Cycle Surge (t = 10ms)	I _{TSM}			80		A
I ² t Value for Fusing (t = 10ms)	I ² t			32		A ² s
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}			4.4		°C/W
Isolation Voltage	V _{ISO}			2500		V(RMS)

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

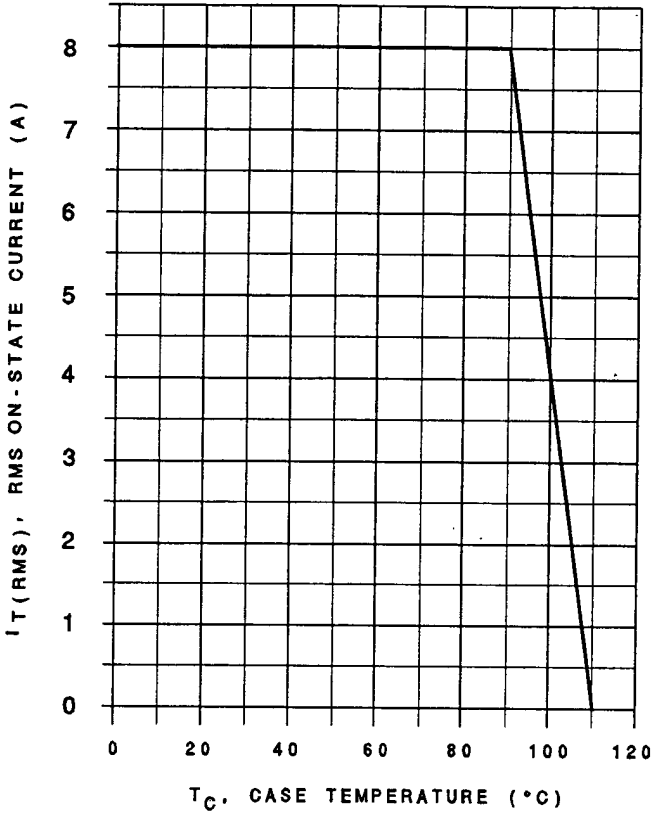
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{DRM}	Rated V _{DRM}			0.01	mA
I _{DRM}	Rated V _{DRM} , T _C = 110°C			0.50	mA
I _{GT}	V _D = 12V, R _L = 33Ω, QUAD I,II,III			25	mA
I _{GT}	V _D = 12V, R _L = 33Ω, QUAD IV			50	mA
I _H	I _T = 100mA			25	mA
V _{GT}	V _D = 12V, R _L = 33Ω, QUAD I,II,III,IV			1.50	V
V _{TM}	I _{TM} = 11A, tp = 10ms			1.75	V
dv/dt	V _D = 2/3 V _{DRM} , R _{GK} = ∞, T _C = 110°C	100			V/µs

(OVER)

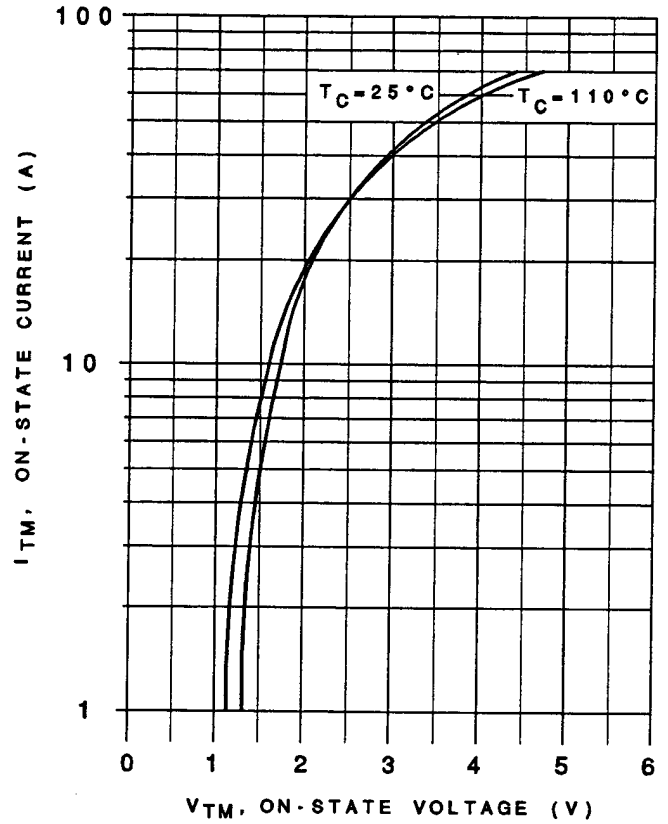
R4

CQ220I-8B SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE

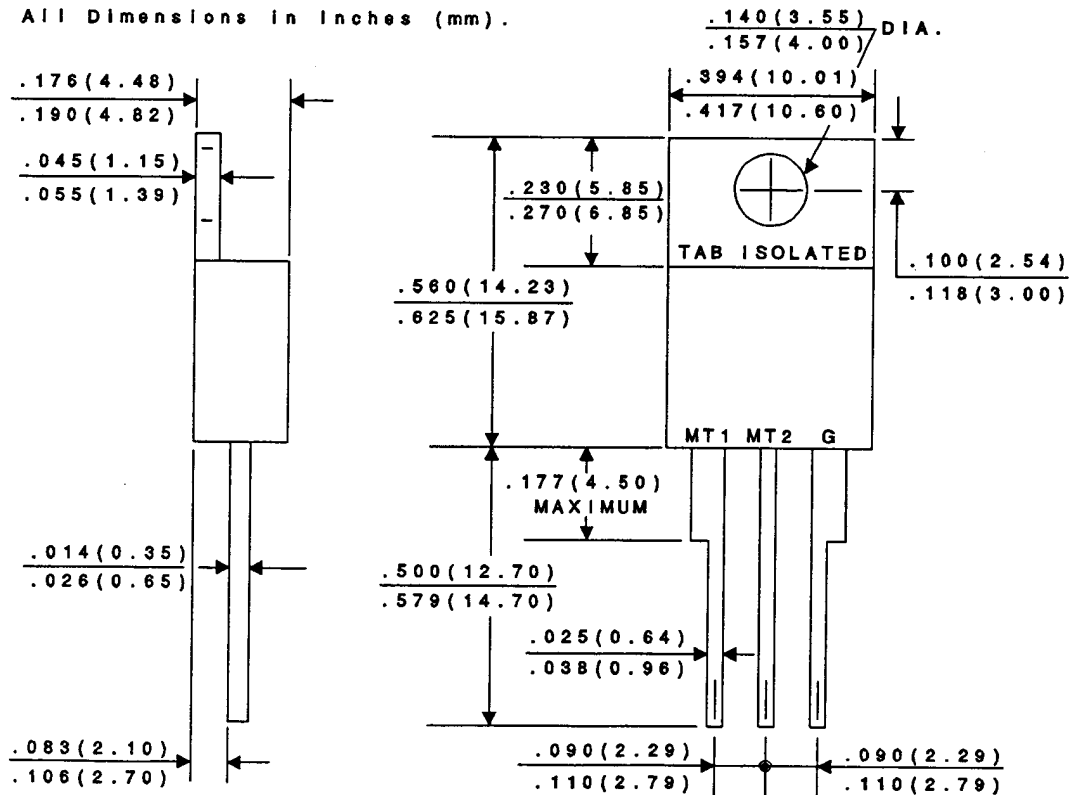


MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL DIMENSIONS

All Dimensions in Inches (mm).



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