

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CQ39BT
CQ39DT
CQ39MT

4.0 AMP TRIAC
200 THRU 600 VOLTS

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ39BT series type is a Hermetically Sealed 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	CQ39BT	CQ39DT	CQ39MT	UNITS
Peak Repetitive Off-State Voltage	V _{DRM}	200	400	600	V
RMS On-State Current (T _C = 80°C)	I _{T(RMS)}		4.0		A
Peak One Cycle Surge (t = 10ms)	I _{TSM}		35		A
I ² t Value for Fusing (t = 10ms)	I ² _t		2.0		A ² s
Peak Gate Power (tp = 10μs)	P _{GM}		3.0		W
Average Gate Power Dissipation	P _{G(AV)}		0.2		W
Peak Gate Current (tp = 10μs)	I _{GM}		1.2		A
Storage Temperature	T _{stg}		-40 to +150		°C
Junction Temperature	T _J		-40 to +125		°C
Thermal Resistance	θ _{J-A}		160		°C/W
Thermal Resistance	θ _{J-C}		9.0		°C/W

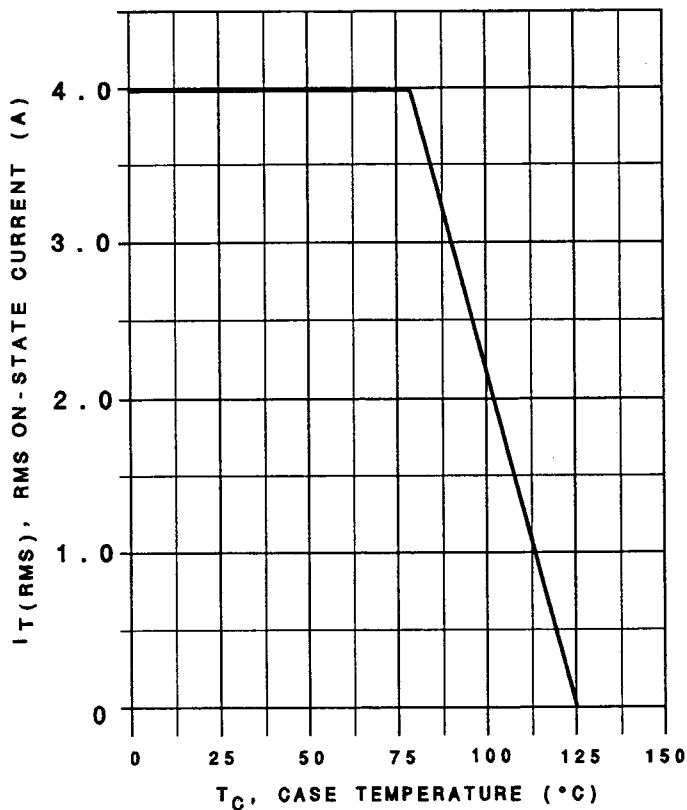
ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{DRM}	Rated V _{DRM} , R _{GK} = 1KΩ			5.00	μA
I _{DRM}	Rated V _{DRM} , R _{GK} = 1KΩ, T _C = 125°C			200	μA
I _{GT}	V _D = 12V, QUAD I,II,III,IV			3.00	mA
I _H	R _{GK} = 1KΩ			3.00	mA
V _{GT}	V _D = 12V, QUAD I,II,III,IV			2.00	V
V _{TM}	I _{TM} = 4.5A			2.10	V
dv/dt	V _D = 2/3 V _{DRM} , T _C = 125°C	30			V/μs

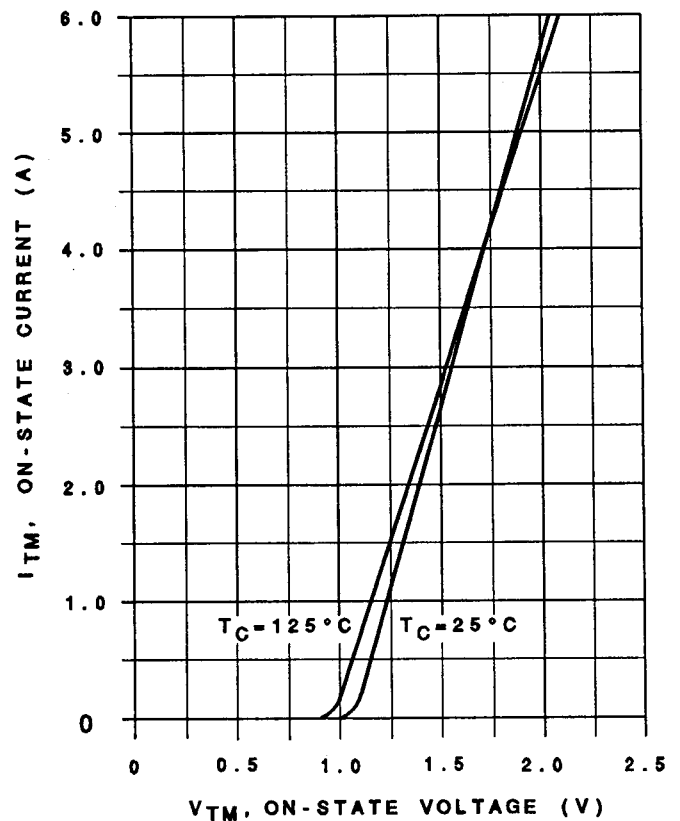
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CQ39BT SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL DIMENSIONS

ALL DIMENSIONS
IN INCHES (mm).

