Data Sheet

Central™
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Manufacturers of World Class Discrete Semiconductors

CQ89BS
CQ89DS
CQ89MS
CQ89NS

SURFACE MOUNT
2.0 AMP TRIAC
200 THRU 800 VOLTS

SOT-89 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ89BS series types are epoxy molded silicon triacs designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

MAXIMUM RATINGS ($T_C = 25°C$)

	SYMBOL	CQ89BS	CQ89DS	CQ89MS	CQ89NS	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	200	400	600	800	V
RMS On-State Current (TC=80°C)	$I_{T(RMS)}$	2.0				A
Peak One Cycle Surge (10ms)	I_{TSM}	10				A
Peak Gate Current	I_{GM}	1.0				A
Average Gate Power Dissipation	$P_{G(AV)}$	0.1				W
StorageTemperature	T_{stg}	-45 to +150				°C
Junction Temperature	T_J	-45 to +125				°C
Thermal Resistance	$\Theta_{J\text{-}C}$	10				°C/W

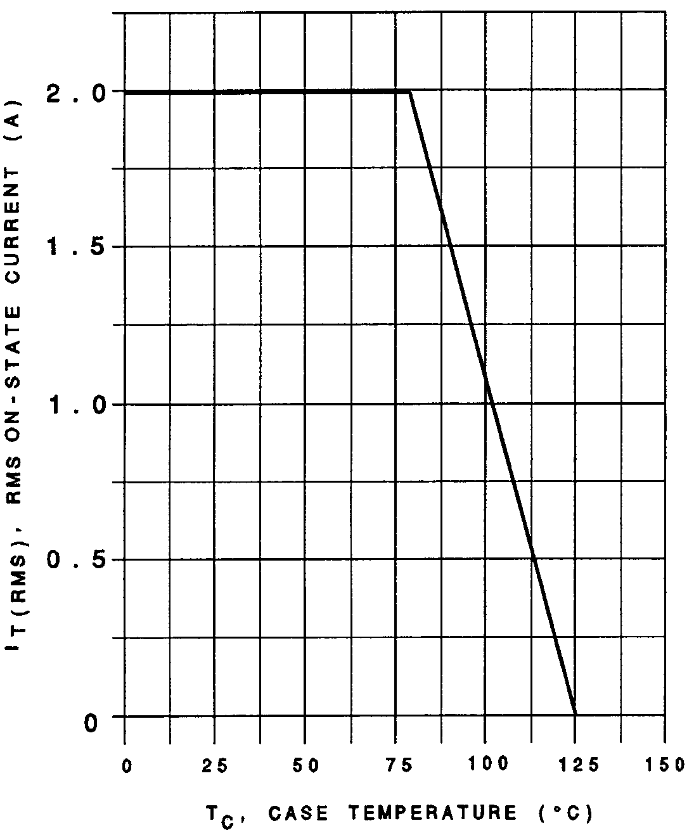
ELECTRICAL CHARACTERISTICS ($T_C = 25°C$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}	V_D=Rated V_{DRM}			5.00	µA
I_{DRM}	V_D=Rated V_{DRM}, T_C=125°C			200	µA
I_{GT}	V_D=12V, QUAD I, II, III, IV			5.00	mA
I_H	V_D=12V			5.00	mA
V_{GT}	V_D=12V			2.00	V
V_{TM}	I_T=3.0A			1.75	V
dv/dt	$V_D = \frac{2}{3} V_{DRM}$, T_C=125°C	30			V/µs

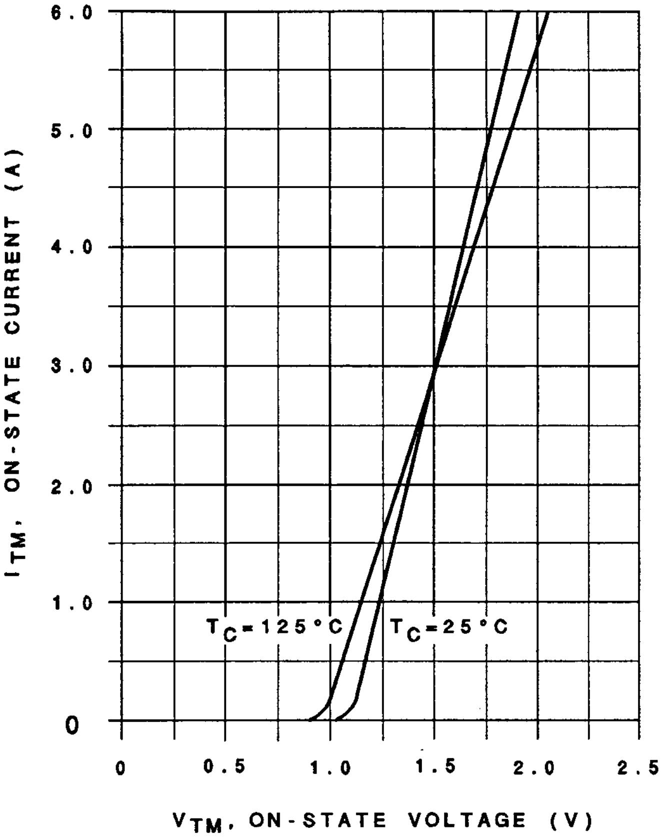
(OVER)

CQ89BS SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE

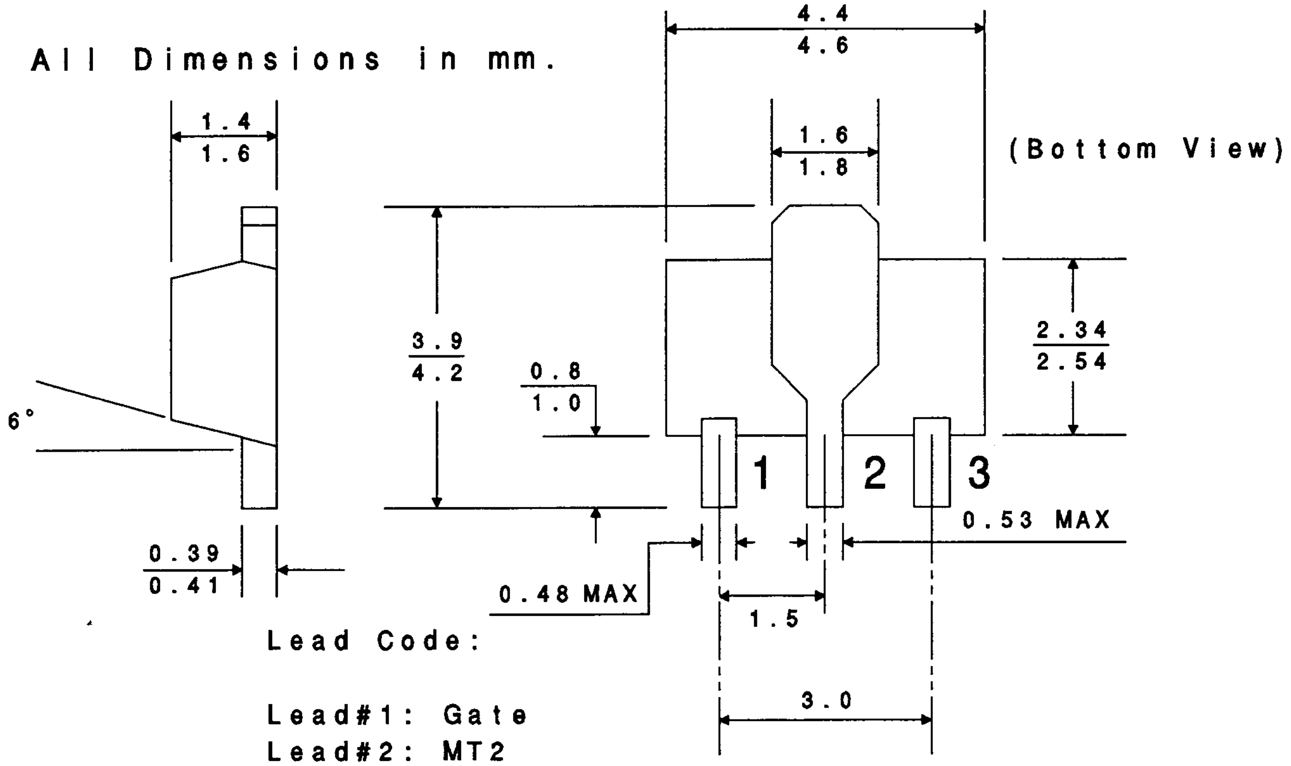


MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL OUTLINE

All Dimensions in mm.



Lead Code:

Lead#1: Gate
Lead#2: MT2
Lead#3: MT1

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