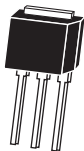


CQ202-4BS-2  
CQ202-4DS-2  
CQ202-4MS-2  
CQ202-4NS-2

4.0 AMP TRIAC  
200 THRU 800 VOLTS



TO-202-2 THYRISTOR CASE

# Central<sup>TM</sup>

Semiconductor Corp.

## DESCRIPTION:

The CENTRAL SEMICONDUCTOR CQ202-4BS-2 series type is an Epoxy Molded Silicon Triac 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)

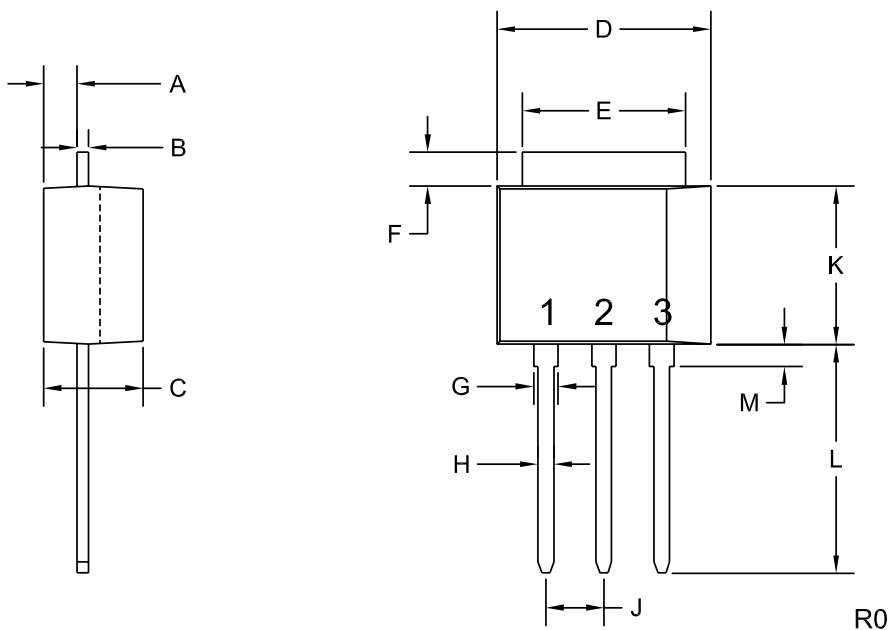
	SYMBOL	CQ202 -4BS-2	CQ202 -4DS-2	CQ202 -4MS-2	CQ202 -4NS-2	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}$	200	400	600	800	V
RMS On-State Current ( $T_C=80^{\circ}\text{C}$ )	$I_{T(RMS)}$		4.0			A
Peak Non-Repetitive Surge Current ( $t=8.3\text{ms}$ )	$I_{TSM}$		40			A
Peak Non-Repetitive Surge Current ( $t=10\text{ms}$ )	$I_{TSM}$		35			A
$I^2t$ Value for Fusing ( $t=10\text{ms}$ )	$I^2t$		6.0			$\text{A}^2\text{s}$
Peak Gate Power ( $t_p=10\mu\text{s}$ )	$P_{GM}$		3.0			W
Average Gate Power Dissipation	$P_{G(AV)}$		0.2			W
Peak Gate Current ( $t_p=10\mu\text{s}$ )	$I_{GM}$		1.2			A
Storage Temperature	$T_{stg}$		-40 to +150			$^{\circ}\text{C}$
Junction Temperature	$T_J$		-40 to +125			$^{\circ}\text{C}$
Thermal Resistance	$\theta_{JA}$		60			$^{\circ}\text{C/W}$
Thermal Resistance	$\theta_{JC}$		7.5			$^{\circ}\text{C/W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^{\circ}\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}$	Rated $V_{DRM}$ , $R_{GK}=1\text{K}\Omega$			10	$\mu\text{A}$
$I_{DRM}$	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		2.5	5.0	mA
$I_{GT}$	$V_D=12\text{V}$ , QUAD IV		5.4	9.0	mA
$I_H$	$R_{GK}=1\text{K}\Omega$		1.6	5.0	mA
$V_{GT}$	$V_D=12\text{V}$ , QUAD I, II, III, IV		0.95	1.75	V
$V_{TM}$	$I_{TM}=6.0\text{A}$ , $t_p=380\mu\text{s}$		1.25	1.75	V
$dv/dt$	$V_D=2/3 V_{DRM}$ , $T_C=125^{\circ}\text{C}$	11			$\text{V}/\mu\text{s}$

R1 (27-June 2005)

TO-202-2 THYRISTOR CASE - MECHANICAL OUTLINE



**LEAD CODE:**

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

NOTE: TAB IS COMMON  
TO PIN 2 (MT2)

**MARKING CODE:**

**FULL PART NUMBER**

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.057	0.061	1.45	1.55
B	0.019	0.021	0.49	0.52
C	0.175	0.180	4.44	4.56
D	0.376	0.388	9.55	9.85
E	-	0.350	-	8.89
F	-	0.070	-	1.78
G	0.035	0.043	0.90	1.10
H	0.023	0.028	0.59	0.71
J	0.098	0.102	2.49	2.59
K	0.280	0.301	7.12	7.65
L	0.406	0.425	10.30	10.80
M	0.024	0.059	0.60	1.50

TO-202-2 Thyristor (REV: R0)

R1 (27-June 2005)