

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

4.0 AMP TRIAC  
 200 THRU 800 VOLTS



TO-202-2 CASE



www.centrasemi.com

**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: FULL PART NUMBER**

**MAXIMUM RATINGS:** (T<sub>C</sub>=25°C unless otherwise noted)

	SYMBOL	CQ202 -4BS-2	CQ202 -4DS-2	CQ202 -4MS-2	CQ202 -4NS-2	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub>	200	400	600	800	V
RMS On-State Current (T <sub>C</sub> =80°C)	I <sub>T(RMS)</sub>			4.0		A
Peak Non-Repetitive Surge Current (t=8.3ms)	I <sub>TSM</sub>			40		A
Peak Non-Repetitive Surge Current (t=10ms)	I <sub>TSM</sub>			35		A
I <sup>2</sup> t Value for Fusing (t=10ms)	I <sup>2</sup> t			6.0		A <sup>2</sup> s
Peak Gate Power (tp=10µs)	P <sub>GM</sub>			3.0		W
Average Gate Power Dissipation	P <sub>G(AV)</sub>			0.2		W
Peak Gate Current (tp=10µs)	I <sub>GM</sub>			1.2		A
Storage Temperature	T <sub>stg</sub>		-40 to +150			°C
Junction Temperature	T <sub>J</sub>		-40 to +125			°C
Thermal Resistance	θ <sub>JA</sub>		60			°C/W
Thermal Resistance	θ <sub>JC</sub>		7.5			°C/W

**ELECTRICAL CHARACTERISTICS:** (T<sub>C</sub>=25°C unless otherwise noted)

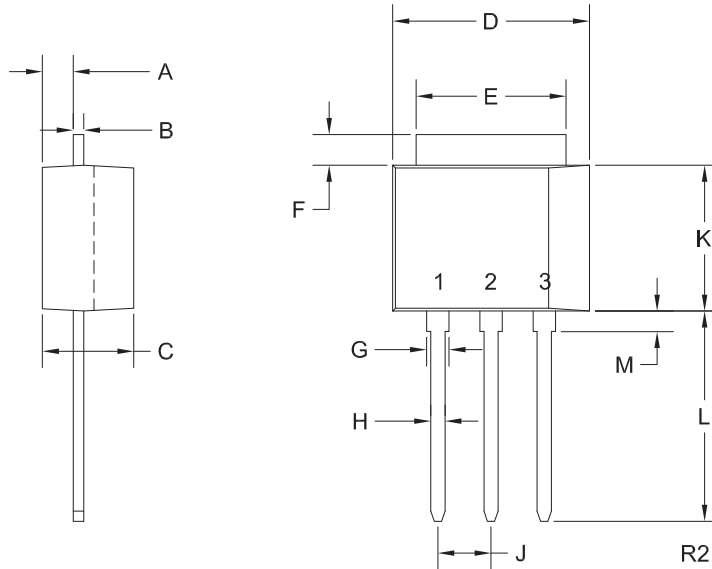
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub>	Rated V <sub>DRM</sub> , R <sub>GK</sub> =1.0KΩ			10	µA
I <sub>DRM</sub>	Rated V <sub>DRM</sub> , R <sub>GK</sub> =1.0KΩ, T <sub>C</sub> =125°C			200	µA
I <sub>GT</sub>	V <sub>D</sub> =12V, QUAD I, II, III		2.5	5.0	mA
I <sub>GT</sub>	V <sub>D</sub> =12V, QUAD IV		5.4	9.0	mA
I <sub>H</sub>	R <sub>GK</sub> =1.0KΩ		1.6	5.0	mA
V <sub>GT</sub>	V <sub>D</sub> =12V, QUAD I, II, III		0.95	1.75	V
V <sub>TM</sub>	I <sub>TM</sub> =6.0A, tp=380µs		1.25	1.75	V
dv/dt	V <sub>D</sub> = <sup>2</sup> / <sub>3</sub> V <sub>DRM</sub> , T <sub>C</sub> =125°C	11			V/µs

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TO-202-2 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

- 1) Cathode
  - 2) Anode
  - 3) Gate
- Tab is common to pin 2

**MARKING:**

**FULL PART NUMBER**

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.071	1.40	1.80
B	0.016	0.024	0.40	0.60
C	0.173	0.181	4.40	4.60
D	0.374	0.413	9.50	10.5
E	0.236	0.355	6.00	9.00
F	-	0.071	-	1.80
G	0.035	0.055	0.90	1.40
H	0.023	0.031	0.59	0.80
J	0.094	0.106	2.39	2.69
K	0.280	0.346	7.12	8.80
L	0.406	0.531	10.3	13.5
M	0.024	0.059	0.60	1.50

TO-202-2 (REV: R2)

R2 (23-April 2012)