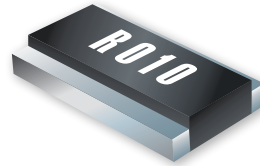




PRODUCT UPDATE MEMO

CURRENT SENSE RESISTORS




Bourns® Model CRK Series Current Sense Resistors are Now Approved as AEC-Q200 Compliant and Automotive Grade

Riverside, California – December 10, 2024 – Bourns is pleased to announce that the [Model CRK0612 and CRK0815 Series Current Sense Resistors](#) are now AEC-Q200 compliant and automotive grade standard components.

Current sense resistors are gaining popularity due to their small package size, accurate TCR and relatively low cost compared to other technologies. These resistors detect and convert current to an easily measured voltage, which is proportional to the current through the device.

The Model CRK series also can be measured as 4-terminal resistors. We provide a recommended layout guide that allows customers to easily design their PCB and measure current flow.

Features

- Wide terminal type
- Excellent heat dissipation
- Low inductance < 5 nH
- Low thermal EMF < 40 $\mu\text{V} / ^\circ\text{C}$
- AEC-Q200 compliant
- Metal alloy plate
- RoHS compliant* and halogen free**
-  **AUTOMOTIVE GRADE**

Applications

- Current sensing
- Power supplies
- Stepper motor drives
- Input amplifiers

Series	Size	Rated Power	Resistance Range	TCR	Tolerance
CRK0612	0612	1 W	1 m Ω ~ 10 m Ω	± 100 PPM / $^\circ\text{C}$	1 %, 5 %
CRK0815	0815	1 W	1 m Ω ~ 30 m Ω	± 100 PPM / $^\circ\text{C}$	1 %, 5 %

Affected Part Numbers:

In order to minimize the impact on customers' designs, the part numbers for the Model CRK0612 and CRK0815 Series will remain the same.

Part Number	TCR	Tolerance
CRK0612-FZ-R001E	± 100 PPM / $^\circ\text{C}$	1 %
CRK0612-FZ-R002E	± 100 PPM / $^\circ\text{C}$	1 %
CRK0612-FZ-R003E	± 100 PPM / $^\circ\text{C}$	1 %
CRK0612-FZ-R004E	± 100 PPM / $^\circ\text{C}$	1 %
CRK0612-FZ-R005E	± 100 PPM / $^\circ\text{C}$	1 %

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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Part Number	TCR	Tolerance
CRK0612-FZ-R006E	±100 PPM / °C	1 %
CRK0612-FZ-R007E	±100 PPM / °C	1 %
CRK0612-FZ-R008E	±100 PPM / °C	1 %
CRK0612-FZ-R009E	±100 PPM / °C	1 %
CRK0612-FZ-R010E	±100 PPM / °C	1 %
CRK0612-JZ-R001E	±100 PPM / °C	5 %
CRK0612-JZ-R002E	±100 PPM / °C	5 %
CRK0612-JZ-R003E	±100 PPM / °C	5 %
CRK0612-JZ-R004E	±100 PPM / °C	5 %
CRK0612-JZ-R005E	±100 PPM / °C	5 %
CRK0612-JZ-R006E	±100 PPM / °C	5 %
CRK0612-JZ-R007E	±100 PPM / °C	5 %
CRK0612-JZ-R008E	±100 PPM / °C	5 %
CRK0612-JZ-R009E	±100 PPM / °C	5 %
CRK0612-JZ-R010E	±100 PPM / °C	5 %
Part Number	TCR	Tolerance
CRK0815-FZ-R001E	±100 PPM / °C	1 %
CRK0815-FZ-R002E	±100 PPM / °C	1 %
CRK0815-FZ-R003E	±100 PPM / °C	1 %
CRK0815-FZ-R004E	±100 PPM / °C	1 %
CRK0815-FZ-R005E	±100 PPM / °C	1 %
CRK0815-FZ-R006E	±100 PPM / °C	1 %
CRK0815-FZ-R007E	±100 PPM / °C	1 %
CRK0815-FZ-R008E	±100 PPM / °C	1 %
CRK0815-FZ-R009E	±100 PPM / °C	1 %
CRK0815-FZ-R010E	±100 PPM / °C	1 %
CRK0815-FZ-R011E	±100 PPM / °C	1 %
CRK0815-FZ-R012E	±100 PPM / °C	1 %
CRK0815-FZ-R013E	±100 PPM / °C	1 %
CRK0815-FZ-R014E	±100 PPM / °C	1 %
CRK0815-FZ-R015E	±100 PPM / °C	1 %
CRK0815-FZ-R016E	±100 PPM / °C	1 %
CRK0815-FZ-R017E	±100 PPM / °C	1 %
CRK0815-FZ-R018E	±100 PPM / °C	1 %
CRK0815-FZ-R019E	±100 PPM / °C	1 %
CRK0815-FZ-R020E	±100 PPM / °C	1 %
CRK0815-FZ-R021E	±100 PPM / °C	1 %
CRK0815-FZ-R022E	±100 PPM / °C	1 %
CRK0815-FZ-R023E	±100 PPM / °C	1 %

Part Number	TCR	Tolerance
CRK0815-FZ-R024E	±100 PPM / °C	1 %
CRK0815-FZ-R025E	±100 PPM / °C	1 %
CRK0815-FZ-R026E	±100 PPM / °C	1 %
CRK0815-FZ-R027E	±100 PPM / °C	1 %
CRK0815-FZ-R028E	±100 PPM / °C	1 %
CRK0815-FZ-R029E	±100 PPM / °C	1 %
CRK0815-FZ-R030E	±100 PPM / °C	1 %
CRK0815-JZ-R001E	±100 PPM / °C	5 %
CRK0815-JZ-R002E	±100 PPM / °C	5 %
CRK0815-JZ-R003E	±100 PPM / °C	5 %
CRK0815-JZ-R004E	±100 PPM / °C	5 %
CRK0815-JZ-R005E	±100 PPM / °C	5 %
CRK0815-JZ-R006E	±100 PPM / °C	5 %
CRK0815-JZ-R007E	±100 PPM / °C	5 %
CRK0815-JZ-R008E	±100 PPM / °C	5 %
CRK0815-JZ-R009E	±100 PPM / °C	5 %
CRK0815-JZ-R010E	±100 PPM / °C	5 %
CRK0815-JZ-R011E	±100 PPM / °C	5 %
CRK0815-JZ-R012E	±100 PPM / °C	5 %
CRK0815-JZ-R013E	±100 PPM / °C	5 %
CRK0815-JZ-R014E	±100 PPM / °C	5 %
CRK0815-JZ-R015E	±100 PPM / °C	5 %
CRK0815-JZ-R016E	±100 PPM / °C	5 %
CRK0815-JZ-R017E	±100 PPM / °C	5 %
CRK0815-JZ-R018E	±100 PPM / °C	5 %
CRK0815-JZ-R019E	±100 PPM / °C	5 %
CRK0815-JZ-R020E	±100 PPM / °C	5 %
CRK0815-JZ-R021E	±100 PPM / °C	5 %
CRK0815-JZ-R022E	±100 PPM / °C	5 %
CRK0815-JZ-R023E	±100 PPM / °C	5 %
CRK0815-JZ-R024E	±100 PPM / °C	5 %
CRK0815-JZ-R025E	±100 PPM / °C	5 %
CRK0815-JZ-R026E	±100 PPM / °C	5 %
CRK0815-JZ-R027E	±100 PPM / °C	5 %
CRK0815-JZ-R028E	±100 PPM / °C	5 %
CRK0815-JZ-R029E	±100 PPM / °C	5 %
CRK0815-JZ-R030E	±100 PPM / °C	5 %

If you have any questions or need additional information, please feel free to [contact Customer Service/Inside Sales](#).