



Bourns Resistor Product Line Announces New AEC-Q200 Compliant, Automotive Grade High Power Thick Film Chip Resistors

Model CRM-Q, CRS-Q, CMP-Q and CHP-Q Series

Riverside, California – January 30, 2023 – Bourns Resistor Product Line continues to broaden its portfolio of high power, surface mount thick film chip resistors by introducing the new Model [CRM-Q](#), [CRS-Q](#), [CMP-Q](#) and [CHP-Q](#) Series thick film chip resistors. These new Q-series models are AEC-Q200 compliant / automotive grade versions of Bourns’ existing Model CRM, CRS, CMP, and CHP Series thick film chip resistors. The following table shows the differences between the standard thick film chip resistor series, the existing -A Series, and the new -Q Series.

Model Series	AEC-Q200 Compliant & Automotive Grade	Sulfur-Resistant
CRM, CRS, CMP, CHP (Standard)	No	No
NEW! CRM-Q, CRS-Q, CMP-Q, CHP-Q	Yes	No
CRM-A, CRS-A, CMP-A, CHP-A	Yes	Yes

These resistors are manufactured using a thick film element printed onto a ceramic substrate. They offer high reliability and are suitable for use in consumer electronics, industrial automation, power supplies, LED lighting applications and communication base stations. The high rated power and superior pulse load capability make them ideal for current limiters and snubber circuits, as well as balancing and bleeder resistors.

- The Bourns® Model CRM-Q Series high power resistors and the Model CRS-Q Series anti-surge resistors are available in three sizes from 1206 (3116 Metric) to 2512 (6432 Metric) with rated power from 0.5 to 2 watts.
- The Model CMP-Q Series pulse power resistors are available in five sizes from 0603 (1608 Metric) to 2512 (6432 Metric) with rated power from 0.25 to 1.5 watts.
- The Model CHP-Q Series ultra-high power resistors relative to size are available in three sizes from 0603 (1608 Metric) to 1206 (3116 Metric) with rated power from 0.33 to 0.75 watts.

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Model Series	Rated Power (Watts)				
	0603	0805	1206	2010	2512
CRM-Q			0.5	1	2
CRS-Q			0.5	1	2
CMP-Q	0.25	0.5	0.75	1	1.5
CHP-Q	0.33	0.5	0.75		

These resistors feature a wide resistance range from 1 ohm to 1 megohm, $\pm 1\%$ / $\pm 5\%$ resistance tolerances and a TCR (Temperature Coefficient of Resistance) of ± 100 ppm/ $^{\circ}$ C and ± 200 ppm/ $^{\circ}$ C.

Features

- High pulse capability
- High rated power
- High reliability
- Up to 2 watts permanent rated power
- Wide resistance range from 1 ohm to 1 megohm
- AEC-Q200 compliant
- RoHS compliant*
- **AUTOMOTIVE GRADE**

Applications

- Inrush current limiting
- Power supplies
- Stepper motor drives
- Input amplifiers
- Voltage dividers
- Snubber circuits
- Digital meters
- LED lighting
- Industrial
- Consumer
- Telecommunications

This new family complements other circuit conditioning components that Bourns offers such as power inductors and rectifier diodes.

Samples and production quantities are now available. For further details on these exciting new models, please contact [Bourns Customer Service/Inside Sales](#).

For additional details on Bourns® AEC-Q Compliant Products, visit the Bourns website at www.bourns.com/products/aec-q-compliant-products.

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