

# Automotive Thick Film Chip Resistors (CQ Series)

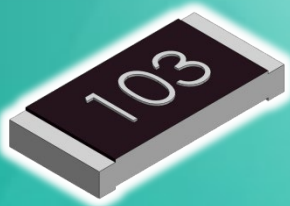


## Features:

- AEC-Q200 Compliant
- Suitable for reflow and wave soldering
- Stable electrical capability, High reliability
- Anti Sulfuration
- Available in KIT packaging 1% E24

## Application:

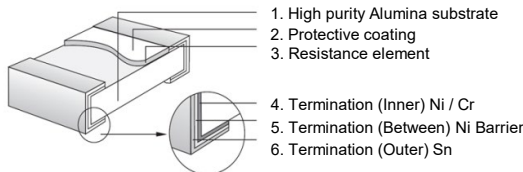
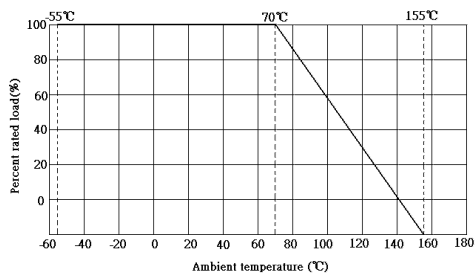
- Entertainment System
- Outdoor Electronic app
- Comfort & Safety Controls
- Lighting
- Batteries & Chargers
- Telecom
- Consumer Electronics
- General purpose



# Automotive Thick Film Chip Resistors (CQ Series)



## Derating Curve



## Operating Temperature Range -55~+155°C

Type	Power (70°C)	Max Working Voltage	Max Overload Voltage	Dielectric With standing Voltage	Resistance Value of Jumper	Rated Current of Jumper	Max. Current of Jumper
CQ01	1/20W	25V	50V	/	<50mΩ	0.5A	1A
CQ02	1/16W	50V	100V	100V	<50mΩ	1A	2A
CQ03	1/10W	75V	150V	300V	<50mΩ	1A	2A
CQ05	1/8W	150V	300V	500V	<50mΩ	2A	5A
CQ06	1/4W	200V	400V	500V	<50mΩ	2A	10A
CQ07	1/2W	200V	500V	500V	<50mΩ	2A	10A
CQ10	3/4W	200V	500V	500V	<50mΩ	2A	10A
CQ12	1W	200V	500V	500V	<50mΩ	2A	10A

## Characteristic

Test Item	Standard	Test Item	Standard
Temperature Coefficient	CQ01: $1\Omega \leq R \leq 10\Omega$ $\pm 400\text{ppm}/^\circ\text{C}$ $>10\Omega$ : $\pm 200\text{ppm}/^\circ\text{C}$ CQ02-CQ12: $1\Omega \leq R \leq 10\Omega$ : $\pm 200\text{ppm}/^\circ\text{C}$ $>10\Omega$ : $\pm 100\text{ppm}/^\circ\text{C}$	Resistance to Soldering Heat	$\pm(1.0\%+0.05\Omega)$ Max
Short Time Overload	$\pm 1\%: \pm(1.0\%+0.1\Omega)\text{Max}$ $\pm 5\%: \pm(2.0\%+0.1\Omega)\text{Max}$	Temperature Cycling	$\pm 1\%: \pm(0.5\%+0.1\Omega)$ Max $\pm 5\%: \pm(1.0\%+0.1\Omega)$ Max
Terminal Bending	$\pm(1.0\%+0.05\Omega)\text{Max}$	Biased Humidity	$\pm 1\%: \pm(1.0\%+0.1\Omega)$ Max $\pm 5\%: \pm(3.0\%+0.1\Omega)$ Max
Solderability	Min. 95%coverage	Load Life	$\pm 1\%: \pm(1.0\%+0.1\Omega)$ Max $\pm 5\%: \pm(3.0\%+0.1\Omega)$ Max
Dielectric Withstanding Voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown	Moisture Resistance	$\pm 1\%: \pm(0.5\%+0.1\Omega)$ Max $\pm 5\%: \pm(3.0\%+0.1\Omega)$ Max

**Note:  $0.1\Omega \sim 0.97\Omega$  :  $\pm 800\text{PPM}/^\circ\text{C}$  can be supply on a case to case basis.**

Load Life test condition: 35% rated power at  $125^\circ\text{C}$ , 1000H.

Anti-sulfurized performance:  $\text{H}_2\text{S}$  3~5ppm,  $50^\circ\text{C}$   $\pm 2^\circ\text{C}$ , 91%~93%RH, 1000H; Excellent stability



**IATF 16949  
ISO 14001**

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