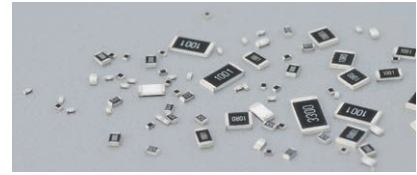


## Feature

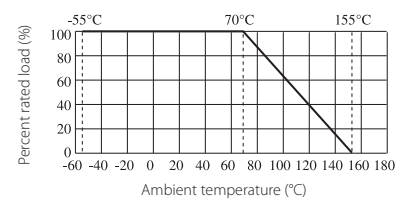
- Tolerance:  $\pm 0.5\%$ ~ $\pm 5\%$
- Application automobile industry, comply with the relevant provisions of AEC-Q200.
- Anti-sulfurized performance: H<sub>2</sub>S 3~5ppm, 50°C $\pm$ 2°C, 91%~93%RH, 1000H
- Resistance range: 1 $\Omega$ ~10M $\Omega$ , 0 $\Omega$
- Operating temperature range: -55°C ~+155°C
- Stable electrical capability, high reliability
- Suit for reflow & wave soldering
- RoHS complaint



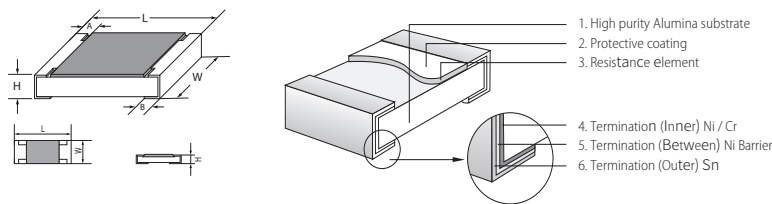
## Application

- Intelligent home appliances
- High-end computer
- Medical equipment
- Industrial equipment
- Outdoor electronic application

## Derating Curve



## Figures



## Dimension (mm)

TType	L	W	H	A	B
CQ01 (0201)	0.60 $\pm$ 0.03	0.30 $\pm$ 0.03	0.23 $\pm$ 0.03	0.12 $\pm$ 0.05	0.15 $\pm$ 0.05
CQ02 (0402)	1.00 $\pm$ 0.10	0.50 $\pm$ 0.05	0.35 $\pm$ 0.05	0.20 $\pm$ 0.10	0.25 $\pm$ 0.10
CQ03 (0603)	1.60 $\pm$ 0.10	0.80 $\pm$ 0.10	0.45 $\pm$ 0.10	0.30 $\pm$ 0.20	0.30 $\pm$ 0.20
CQ05 (0805)	2.00 $\pm$ 0.15	1.25 <sup>+0.15</sup> <sub>-0.10</sub>	0.55 $\pm$ 0.10	0.40 $\pm$ 0.20	0.40 $\pm$ 0.20
CQ06 (1206)	3.10 $\pm$ 0.15	1.55 <sup>+0.15</sup> <sub>-0.10</sub>	0.55 $\pm$ 0.10	0.45 $\pm$ 0.20	0.45 $\pm$ 0.20
CQ07 (1210)	3.10 $\pm$ 0.10	2.60 $\pm$ 0.20	0.55 $\pm$ 0.10	0.50 $\pm$ 0.25	0.50 $\pm$ 0.20
CQ10 (2010)	5.00 $\pm$ 0.10	2.50 $\pm$ 0.20	0.55 $\pm$ 0.10	0.60 $\pm$ 0.25	0.50 $\pm$ 0.20
CQ12 (2512)	6.35 $\pm$ 0.10	3.20 $\pm$ 0.20	0.55 $\pm$ 0.10	0.60 $\pm$ 0.25	0.50 $\pm$ 0.20

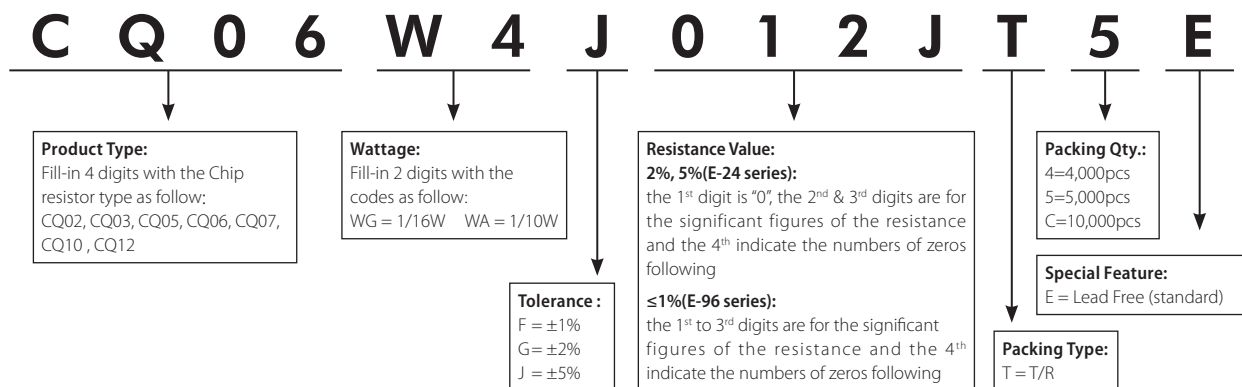
## Specification

Type	Power (70°C)	Tolerance	Resistance Range	Max Working Voltage	Max Overload Voltage	Dielectric With-standing Voltage	Resistance Value of Jumper	Rated Current of Jumper	Max. Current of Jumper	Operating Temperature Range
CQ01(0201)	1/20W	$\pm 0.5\%$ $\pm 1\%$ $\pm 2\%$ $\pm 5\%$	0 $\Omega$ 1 $\Omega$ ~10M $\Omega$	25V	50V	/	<50m $\Omega$	0.5A	1A	-55~+155°C
CQ02(0402)	1/16W			50V	100V	100V	<50m $\Omega$	1A	2A	
CQ03(0603)	1/10W			75V	150V	300V	<50m $\Omega$	1A	2A	
CQ05(0805)	1/8W			150V	300V	500V	<50m $\Omega$	2A	5A	
CQ06(1206)	1/4W			200V	400V	500V	<50m $\Omega$	2A	10A	
CQ07(1210)	1/2W			200V	500V	500V	<50m $\Omega$	2A	10A	
CQ10(2010)	3/4W			200V	500V	500V	<50m $\Omega$	2A	10A	
CQ12(2512)	1W			200V	500V	500V	<50m $\Omega$	2A	10A	

## Performance Specification

Test Item	Reference standard	Test Methods	Evaluation Criteria
Temperature Coefficient of Resistance	MIL-STD-202 Method 304	Measure between: -55°C ~+155°C	CQ01: $1\Omega \leq R \leq 10\Omega$ : -100~+350ppm/°C >10Ω: ±200ppm/°C CQ02-CQ12: $1\Omega \leq R \leq 10\Omega$ : ±200ppm/°C >10Ω: ±100ppm/°C
Pre- and Post-Stress Electrical Test (Short time Overload)	AEC-Q200 TEST 1 IEC60115 4.13	2.5x Rated voltage or Max. Overload Voltage whichever is lower for 5 seconds, then check the resistance.	±1%: ±(1.0%+0.05Ω) ±5%: ±(2.0%+0.05Ω)
Biased Humidity	AEC-Q200 TEST 7 MIL-STD-202 Method 103	1000 hours 85°C/85%RH. Note: Specified conditions:10% of operating power. Measurement at 24±4 hours after test conclusion.	±1%: ±(1.0%+0.05Ω) ±5%: ±(3.0%+0.05Ω)
Operational Life	AEC-Q200 TEST 8 MIL-STD-202 Method 108	1,000 hours at 125°C, applied de-rated (36%) power of continuous working voltage, 1.5 hours on, 0.5 hour off.	±1%: ±(1.0%+0.1Ω) ±5%: ±(3.0%+0.1Ω)
Resistance to Soldering Heat	AEC-Q200 TEST 15 MIL-STD-202 Method 210	Condition B No pre-heat of samples. Note: Single Wave Solder - Procedure 2 for SMD and Procedure 1 for Leaded with solder within 1.5mm of device body.	±(1.0%+0.05Ω)
Solderability	AEC-Q200 TEST 18 J-STD-002	SMD. Electrical test not required. Magnification 50 X. <b>Conditions:</b> 1. Baking 4 hours@155°C dry heat, dipping @ 245±3°C for 5±0.5 second. 2. Steam aging 8 hours, dipping @ 260±3°C for 30±0.5 second.	Coverage must be over 95%.
Board Flex	AEC-Q200 TEST 21 AEC-Q200-005	Bending 3mm(CQ01-CQ05)/2mm(CQ06-CQ12)for 60±5sec	±(1.0%+0.05Ω)
Sulfuration test		H <sub>2</sub> S 3~5PPM 50°C±2°C 91%~93% RH 1000H	±5%: ±(5.0%+0.05 Ω) ±1%: ±(1.0%+0.05 Ω)

## Ordering Procedure (Example: CQ06 1/4W 5% 1.2 Ω T/R-5000)



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