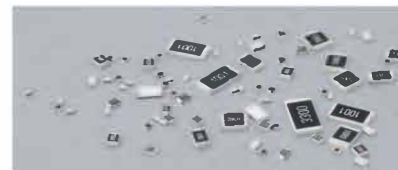


## Feature (特性)

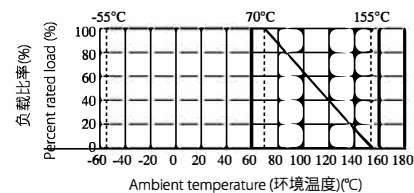
- Tolerance 精度为:  $\pm 0.5\% \sim \pm 5\%$
- AEC-Q200 qualified 符合AEC-Q200相关条款
- Anti-sulfurized performance 具有抗硫化性能:  $H_2S$  3~5ppm,  $50^\circ C \pm 2^\circ C$ , 91%~93%RH, 1000H
- Stable electrical capability, high reliability 电性能稳定, 可靠性高
- Suitable for reflow & wave soldering 适合于回流焊或波峰焊接
- RoHS complaint 符合欧盟ROHS 标准



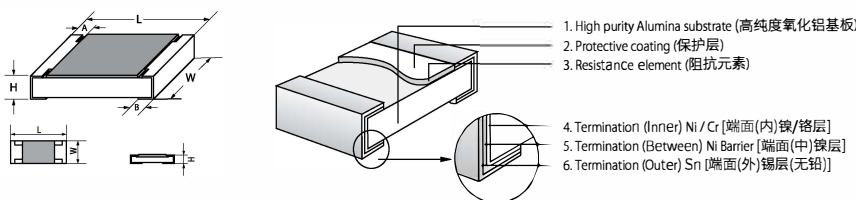
## Application (应用)

- Intelligent home appliances 智能家电产品
- High-end computer 电脑终端
- Medical equipment 医疗设备
- Industrial equipment 工业设备
- Outdoor electronic application 电子门禁
- Electronics: car audio, driving recorder, navigation products  
电子: 汽车音响, 行车记录仪, 导航产品

## Derating Curve 降功率曲线



## Figures (型状)



## Dimension (尺寸) mm

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

## Specification (性能)

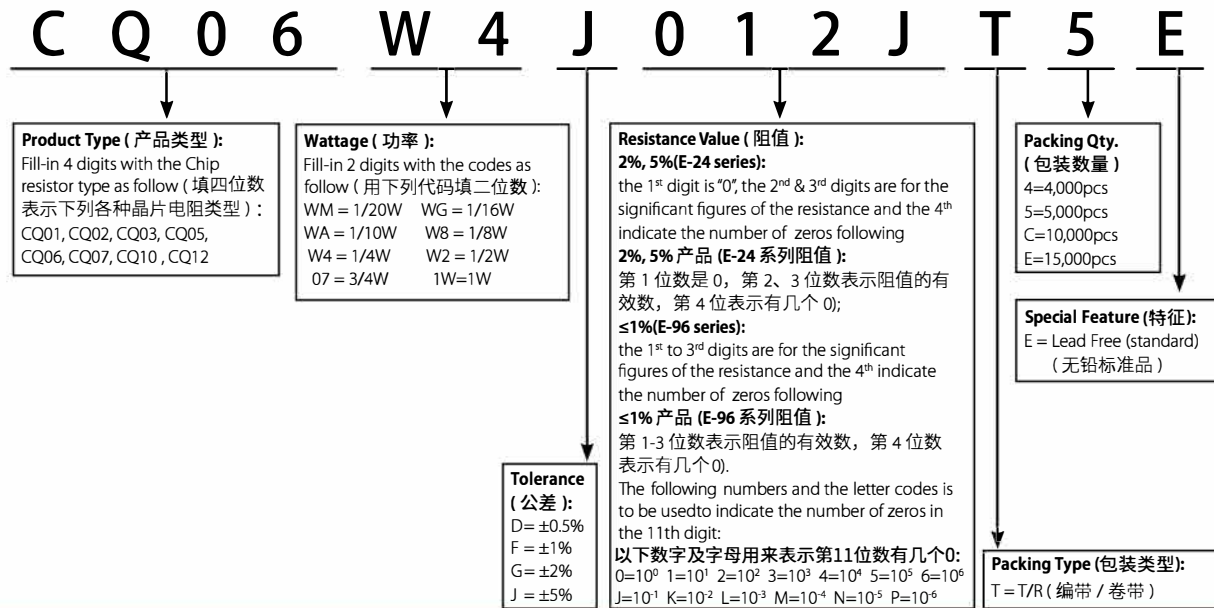
Type 类型	Power Rating 额定功率	Tolerance 精度	Resistance Range 阻值范围	Max Working Voltage 最大工作电压	Max Overload Voltage 最大过负荷电压	Dielectric With-standing Voltage 绝缘耐压	Resistance Value of Jumper 零欧姆电阻阻值	Rated Current of Jumper 零欧姆电阻额定电流	Max. Current of Jumper 零欧姆电阻最大电流	Operating Temperature Range 工作温度范围
CQ01(0201)	1/20W	±0.5%	0 Ω	25V	50V	/	<50mΩ	0.5A	1A	-55~+155°C
CQ02(0402)	1/16W			50V	100V	100V	<50mΩ	1A	2A	
CQ03(0603)	1/10W			75V	150V	300V	<50mΩ	1A	2A	
CQ05(0805)	1/8W	±1%	1Ω~10MΩ	150V	300V	500V	<50mΩ	2A	5A	
CQ06(1206)	1/4W	±2%		200V	400V	500V	<50mΩ	2A	10A	
CQ07(1210)	1/2W	±5%		200V	500V	500V	<50mΩ	2A	10A	
CQ10(2010)	3/4W			200V	500V	500V	<50mΩ	2A	10A	
CQ12(2512)	1W			200V	500V	500V	<50mΩ	2A	10A	

## Performance Specification (性能)

Test Item 试验项目	Reference standard 参考标准	Test Methods 试验方法	Evaluation Criteria 判定标准
Temperature Coefficient of Resistance 温度系数	MIL-STD-202 Method 304	Measure between: -55°C ~+155°C 测定范围: -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) 短时间过负荷	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. 2.5 倍额定电压或最大过负荷电压 (取其低者), 持续 5 秒钟, 然后测阻值。	±1%: ±(1.0%+0.05Ω) ±5%: ±(2.0%+0.05Ω)
Biased Humidity 偏置湿度	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. 在温度 85 °C, 湿度 85% 的条件下放置 1000 小时。 注意: 指定条件: 工作功率的 10%, 试验结束后 24±4 小时内进行测试。	±1%: ±(1.0%+0.05Ω) ±5%: ±(3.0%+0.05Ω)
Operational Life 工作寿命	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. 125°C 下 36% 的额定功率, 1.5 小时 ON, 0.5 小时 OFF, 1000H.	±1%: ±(1.0%+0.1Ω) ±5%: ±(3.0%+0.1Ω)
Resistance to Soldering Heat 耐焊接热	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. 条件 B, 样品不进行预热。注意: 单一波峰焊 - 表面贴装元件按程序 2: 引脚产品按程序 1 进行焊接, 浸入器件本体的 1.5mm 的深度	±(1.0%+0.05Ω)
Solderability 可焊性	AEC-Q200 TEST 18 J-STD-002	SMD. Electrical test not required. Magnification 50 X. Conditions: 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. 表面贴装元件, 不需要电气测试. 放大倍数 50 倍. 测试条件: 1. 155°C 干燥 4H 后, 245°C 5±0.5 秒浸锡. 2. 8H 蒸汽后, 260±3°C 30±0.5 秒浸锡.	Coverage must be over 95%.
Board Flex 弯曲	AEC-Q200 TEST 21 AEC-Q200-005	Bending 3mm(CQ01-CQ05)/2mm(CQ06-CQ12) for 60±5sec 弯曲 3mm(CQ01-CQ05)/2mm(CQ06-CQ12) 保持 60±5 秒	±(1.0%+0.05Ω)
Anti-Sulfurized test 硫化测试		H <sub>2</sub> S 3~5PPM 50°C±2°C 91%~93% RH 1000H	±5%: ±(5.0%+0.1 Ω) ±1%: ±(1.0%+0.1 Ω)
Anti-Sulfurized test 硫化测试	ASTMB-809-95	Sulfur (Saturated vapor) 硫 (饱和蒸汽) • Test temp. 测试温度: 50±2°C • Relative humidity 相对湿度: 86~90%RH • Test time 测试时长: 1000H	±(1%+0.05Ω)

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

订购方式 (例如: CQ06 1/4W 5% 1.2 Ω T/R-5000)



Remark: For more details, please check page 171, Part No. System. 注: 更多细节详见 P171 标准料号系统。