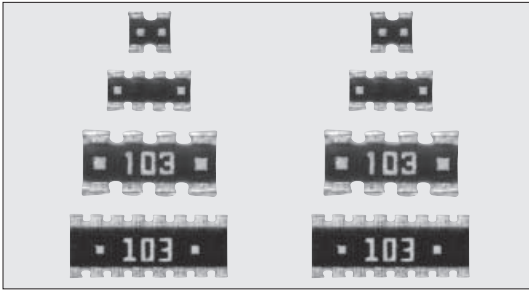
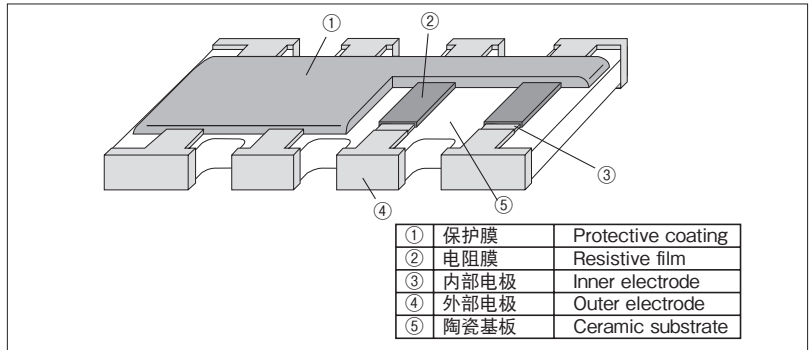


CN-KRT 抗硫化网络电阻器 (贴片) (凸型) Anti Sulfuration Chip Networks (Convex Termination)



外观颜色: 黑色
Coating color: Black

■ 结构图 Construction



■ 特点 Features

- 由于内部上面电极使用高性能耐硫化材料, 因此内部上面电极不会产生硫化断线。
- 比片状电阻的安装密度高。
- 产品使用个数减少, 贴片成本降低。
- 焊接角检查很方便。
- 贴片时图像识别很方便。
- 对应回流焊。
- 端子为无铅品对应欧盟RoHS。电极, 电阻, 玻璃釉包含铅玻璃成分, 此成分不包含在欧盟RoHS之中。
- Excellent anti-sulfuration characteristic due to using high sulfuration-proof inner top electrode material.
- More advancement in the mounting density than individual chip resistors.
- Mounting cost reduction by decreasing the number of parts mounting times.
- Easy soldering fillet inspection.
- Suitable for an image recognition mounter due to square corner design.
- Suitable for reflow soldering.
- Products with lead free termination meet EU-RoHS requirements. EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.

■ 品名构成 Type Designation

实例 Example

CN	1E	4	K	RT	TD	103	J
品种 Product Code	形状 Size	素子数 Number of Resistors	端子记号 Terminal Symbol	端子表面材质 Terminal Surface Material	二次加工 Taping	公称电阻值 Nominal Resistance	阻值允许偏差 Resistance Tolerance
	1E 1J 1F	2 4 8	K: 凸型电极制品有方角 K: Convex type with squared corners	RT:Sn	TD:Paper BK:Bulk	F:4 digits J:3 digits	F:±1% J:±5%

端子表面材质, 以无铅品为准。

欲知关于此产品含有的环境负荷物质详情 (除EU-RoHS以外), 请与我们联系。
编带细节请参考卷末附录C。

The terminal surface material lead free is standard.

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping, please refer to APPENDIX C on the back pages.

■ 参考标准 Reference Standards

IEC 60115-1
JIS C 5201-1

■ 用途 Applications

- 用于数字电路的推挽电阻。
- Resistors for Pull-up/Pull-down resistor for digital circuits.

■ 额定值 Ratings

型号 Type	额定功率 Power Rating (W/Element)	电阻值范围 Resistance Range (Ω)		电阻温度系数 T.C.R. (×10 ⁻⁶ /K)		最高使用电压 Max. Working Voltage	最高过载电压 Max. Overload Voltage	额定周围温度 Rated Ambient Temperature	使用温度范围 Operating Temperature Range	编带和包装数/卷 Taping & Q'ty/Reel (pcs)
		F: ±1% E24 • E96	J: ±5% E24	F: ±1% E24 • E96	J: ±5% E24					
CN1E2KRT	0.063	—	—	—	—	25V	50V	+70°C	-55°C~+125°C	10,000
CN1E4KRT		10~1M	3~1M	±200: R≥10Ω	±200: R≥10Ω	50V	100V		-55°C~+155°C	
CN1J4KRT				±100: R≥10Ω	±400: R<10Ω				-55°C~+125°C	
CN1F8KRT	0.063 ^{※1}	—	10~1M	—	—	25V	50V	-55°C~+125°C	5,000	

按照额定功率使用时, 比单一的贴片电阻的发热温度高, 在使用时请加以注意。

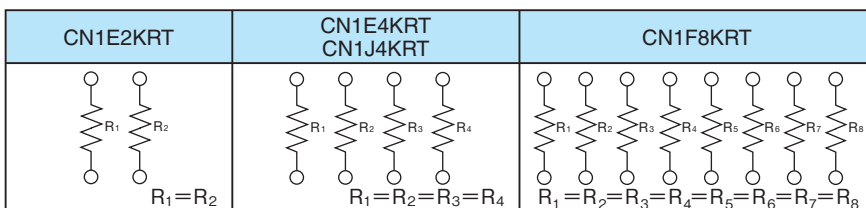
Please note that network resistors generate higher heat rather than single flat chip resistor even under rated power output.

※1 每个配件0.25W 0.25W per Package.

额定电压是√(额定功率×公称电阻值)所算出的值或表中最高使用电压两者中小值为额定电压。

Rated voltage = √(Power Rating × Resistance value) or Max. working voltage, whichever is lower.

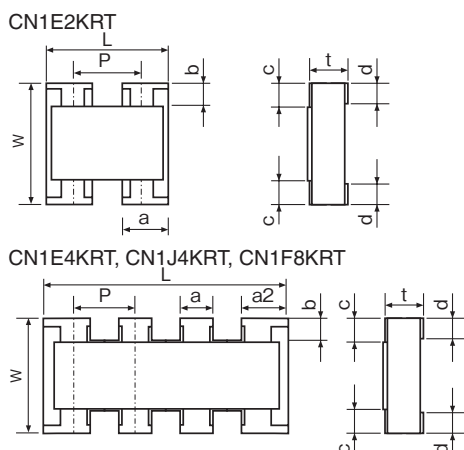
■ 电路构成 Circuit Construction



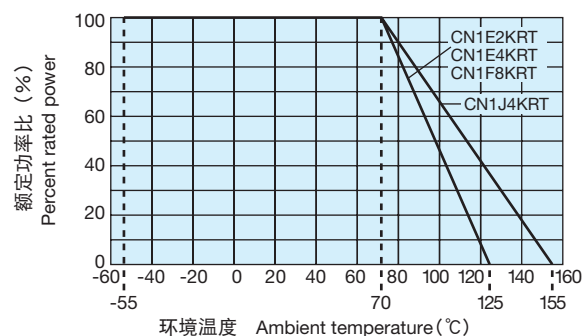
■ 跳线额定 Jumper Ratings

型号 Type	电阻值 Resistance	额定电流 Current Rating	最大浪涌电流 Max. Surge Current
CNZ1E4KRT	100mΩ以下	0.5A	2A
CNZ1J4KRT	100mΩ max.		

■ 外形尺寸 Dimensions



■ 负荷减轻特性曲线 Derating Curve



在环境温度70℃以上使用时，应按照上图负荷减轻特性曲线，减小额定功率。
For resistors operated at an ambient temperature of 70℃ or above, a power rating shall be derated in accordance with the above derating curve.

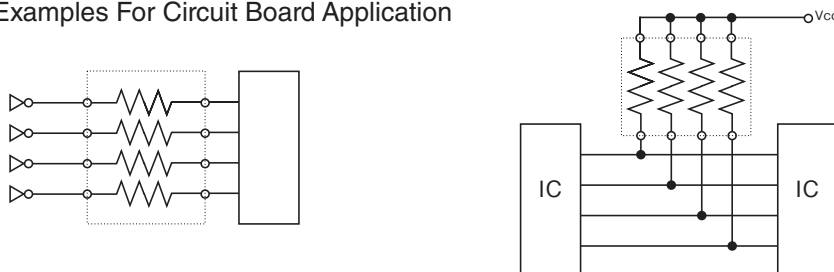
型号 Type (Inch Size Code)	尺寸 Dimensions (mm)									Weight (g) (1000pcs)
	L	W	c	d	t±0.1	a	a2	b	P	
CN1E2KRT (0402×2)	1.0±0.1	1.0±0.1	0.15±0.1	0.25±0.1	0.35	0.33±0.1	—	0.17±0.05	(0.67)	1.2
CN1E4KRT (0402×4)	2.0±0.1	1.0±0.1	0.15±0.1	0.25±0.2	0.35	0.3±0.15	0.4±0.15	0.15±0.1	(0.5)	2.4
CN1J4KRT (0603×4)	3.2±0.15	1.6±0.15	0.3±0.2	0.25±0.1	0.50	0.5±0.15	0.65±0.15	0.3±0.1	(0.8)	7.5
CN1F8KRT (0602×8)	3.8±0.1	1.6±0.1	0.3±0.1	0.3±0.1	0.45	0.3±0.1	—	(0.15)	(0.5)	8.6

() 内的数值作为参考。 Figures in parenthesis are referential values.

■ 性能 Performance

试验项目 Test Items	标准值 Performance Requirements ΔR±%		试验方法 Test Methods
	保证值 Limit	代表值 Typical	
电阻值 Resistance	在规定的允许偏差内 Within specified tolerance	—	25℃
电阻温度系数 T.C.R.	在规定的值以内 Within specified T.C.R.	—	+25℃/55℃ and +25℃/+125℃
过载(短时间) Overload (Short time)	2	0.25	额定电压×2.5倍施加5秒钟 Rated voltage×2.5 for 5s
耐焊接热 Resistance to soldering heat	1	0.75	260℃±5℃, 10s±1s
温度突变 Rapid change of temperature	1	0.5	-55℃ (30min.) / +125℃ (30min.) 5 cycles
耐湿负荷 Moisture resistance	5	1	40℃±2℃, 90%~95%RH, 1000h 1.5小时ON、0.5小时OFF的周期 1.5h ON/0.5h OFF cycle
在70℃时的耐久性 Endurance at 70℃	5	0.5	70℃±2℃, 1000h 1.5小时ON、0.5小时OFF的周期 1.5h ON/0.5h OFF cycle
高温放置 High temperature exposure	1	0.15	+125℃, 1000h CN1E2KRT, CN1E4KRT, CN1F8KRT
		0.25	+155℃, 1000h CN1J4KRT
硫化试验 Sulfuration test	5	—	用含硫3.5%的工业油浸渍 105℃±3℃ 500h Soaked in industrial oil with sulfur substance 3.5% contained 105℃±3℃ 500h

■ 应用范例 Examples For Circuit Board Application



■ 使用注意事项 Precautions for Use

- 网络电阻器偶尔会发生串扰的情况，当把它们用于高频电路时，在电路设计时请考虑串扰的影响。
- A few cross talks will occur in network resistors. In case of using them for a high frequency circuit, please design circuits taking the effect by the cross talks into consideration.