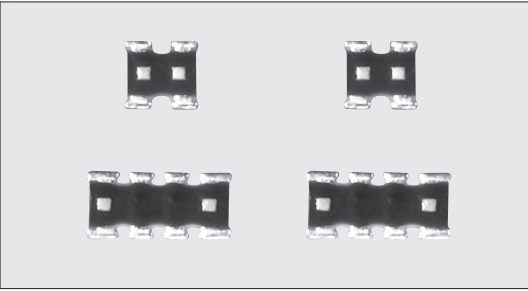


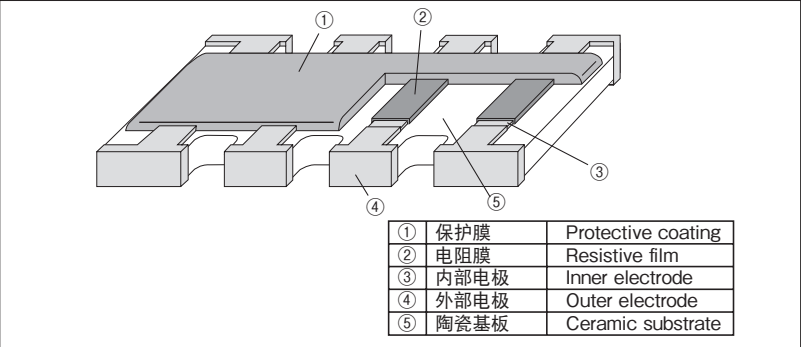
CN-KRT

抗硫化片式网络电阻器（凸型）
Anti Sulfuration Chip Networks (Convex Termination)



外观颜色：黑色
Coating color: Black

结构图 Construction



特点 Features

- 内部上电极使用高性能耐硫化材料，内部上电极不会产生硫化断线。
- 和片状电阻比贴片密度增加。
- 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 mouter 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	2 4	K: 凸型电极制品有方角 K: Convex type with squared corners	RT:Sn	TD:Paper BK:Bulk	3 digits	J:±5%

端子表面材质，以无铅品为准。
预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

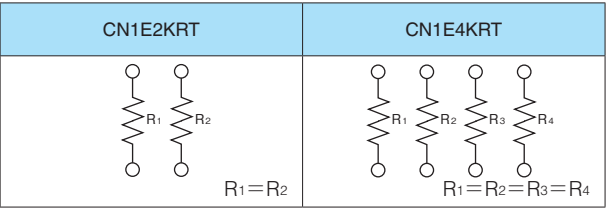
- 用于数字电路的推挽电阻。
- Resistors for Pull-up/Pull-down resistor for digital circuits.

额定值 Ratings

型号 Type	额定功率 Power Rating (W/Element)	电阻值范围 Resistance Range (Ω) J:±5% E24	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 Max. Overload Voltage	使用温度范围 Max. Overload Voltage	编带和包装数/卷 Taping & Q'ty/Reel (pcs)
CN1E2KRT	0.063	3~1M	±200: R≥10Ω ±400: R<10Ω	25V	50V	+70℃	-55℃~+125℃	TD 10,000
CN1E4KRT								

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.
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的值为额定电压。
Rated voltage=√Power Rating×Resistance value or Max. working voltage, whichever is lower.

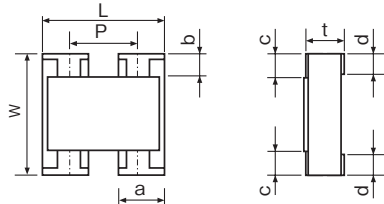
电路构成 Circuit Construction



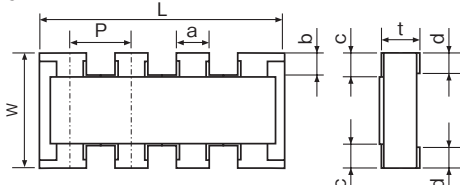
本样本手册中记载的产品规格如有变更，恕不一一奉告。订购以及使用之前，请仔细确认规格表的内容。
用于车载设备、医疗设备、航空设备以及其它涉及人身安全、或可能引起重大损失的设备上时，请务必事先与我公司联系。这些产品在这类用途中出现故障或失灵可能导致人身事故或严重损坏。
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.
Contact our sales representatives before you use our products for applications including automobiles, medical equipment and aerospace equipment.
Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

■ 外形尺寸 Dimensions

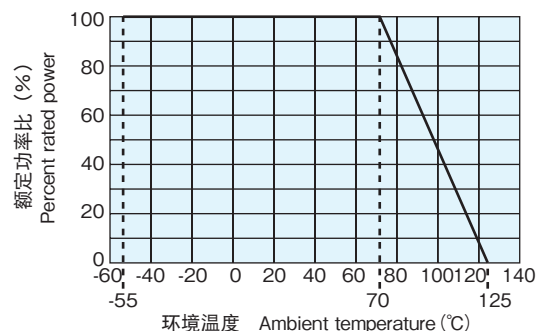
CN1E2K



CN1E4K



■ 负荷特性曲线 Derating Curve



在环境温度70℃以上使用时，应按照上图负荷特性曲线，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.

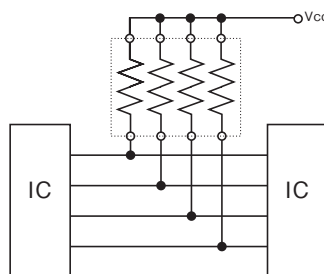
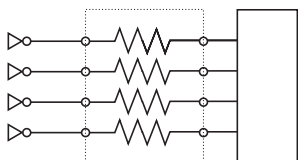
型号 Type	尺寸 Dimensions (mm)								Weight (g) (1000pcs)
	L±0.1	W±0.1	c±0.1	d	t±0.1	a	b	P	
CN1E2KRT	1.0	1.0	0.15	0.25±0.1	0.35	0.33±0.1	0.17±0.05	(0.65)	1.2
CN1E4KRT	2.0	1.0	0.15	0.25±0.2	0.35	0.3±0.15	0.15±0.1	(0.5)	2.4

() 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 $\Delta R \pm \%$		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
低温放置 Low temperature exposure	1	0.1	-55℃, 1h
高温放置 High temperature exposure	1	0.15	+125℃, 100h

■ 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Cross Talk的情况，当把它们用于高频电路时，在电路设计时请考虑Cross Talk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.