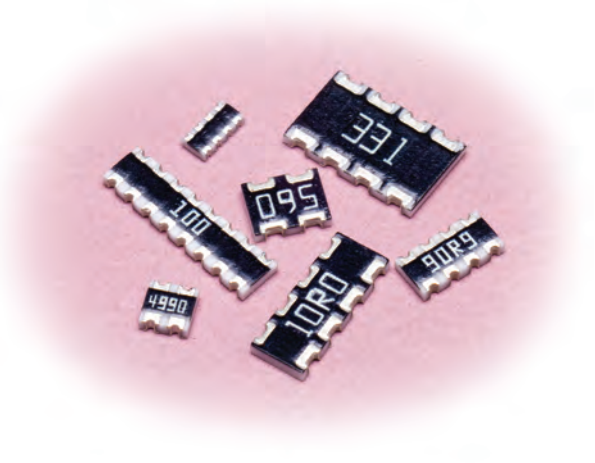
KOA SPEER ELECTRONICS, INC.

CN-RT

anti sulfuration chip networks (concave termination)

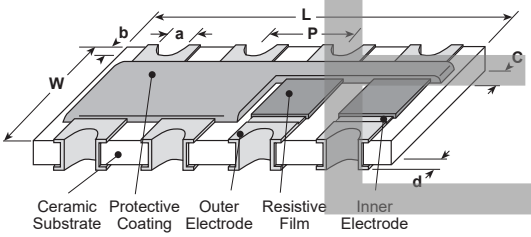
EU RoHS COMPLIANT



features

- 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
- Higher self-alignment effect in reflow-soldering process
- Suitable for an image recognition mounter due to square corner design
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.

dimensions and construction



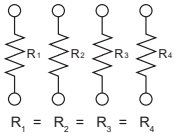
Type	Dimensions inches (mm)									Weight (g)
	L±0.2	W±0.2	c	d±0.1	t±0.1	a (top)	a (bottom)	b±0.1	P	
CN1J4RT (0603x4)	0.126 (3.2)	0.06 (1.6)	.01±.008 (0.3±0.2)	0.016 (0.4)		.02±.004 (0.5±0.1)	.016±.006 (0.4±0.15)		0.031 (0.8)	10.2
CN2A4RT (0805x4)	0.2 (5.08)	0.08 (2.0)	.016±.008 (0.4±0.2)	0.022 (0.55)	0.024 (0.6)	.03±.004 (0.8±0.1)	.03±.006 (0.75±0.15)	0.006 (0.15)	0.05 (1.27)	20.6
CN2B4RT (1206x4)		0.126 (3.2)	.02±.01 (0.5±0.3)							33.5

ordering information

CN	1J	4	RT	TD	103	J
Type	Size	Number of Resistors	Termination Material	Packaging	Nominal Resistance	Tolerance
CN CNZ	1J 2A 2B	4	RT : Sn	TD: 7" paper TE: 7"plastic embossed	2 significant figures + 1 multiplier	J : ±5%

For further information on packaging, please refer to Appendix A.

circuit schematic

CN1J4RT CN2A4RT CN2B4RT	

jumper ratings

Type	Resistance	Current Rating	Max. Surge Current
CNZ1J4RT	50mΩ max.	0.5A	2A
CNZ2A4RT		1.0A	3A
CNZ2B4RT			4A

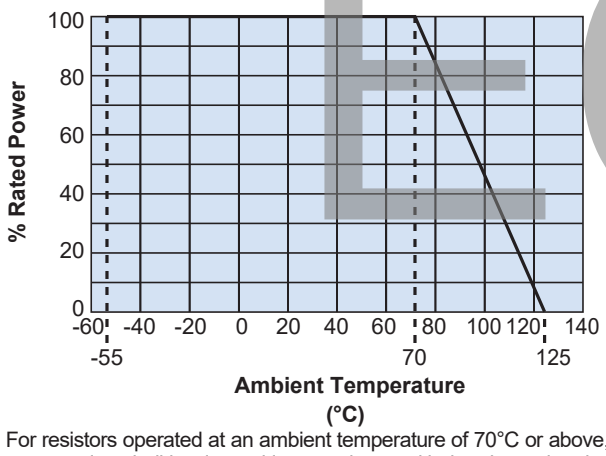
applications and ratings

Part Designation	Power Rating (per Element)	T.C.R. (x10^{-6}/K)	Resistance Range (Ω) J:±5% E24	Absolute Maximum Working Voltage	Maximum Overload Voltage	Rated Working Temperature	Operating Temperature Range	Taping & Quantity Reel (pcs) TD	Taping & Quantity Reel (pcs) TE
CN1J4RT	0.063	±200	10~1M	50V	100V	+70°C	-55°C to +125°C	5,000	—
CN2A4RT	0.1			100V	200V			—	4,000
CN2B4RT	0.125			200V	400V			—	4,000

* Note that network resistors generate higher heat rather than single flat chip resistors even under rated power output

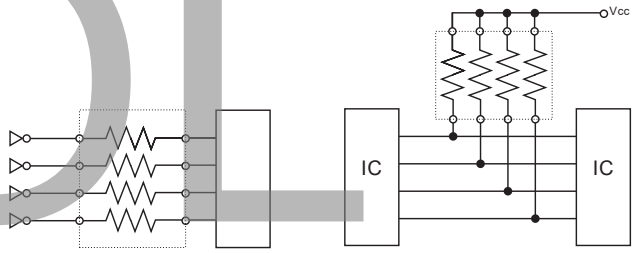
environmental applications

Derating Curve



For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

Circuit Board Application



Performance Characteristics

Parameter	Requirement Δ R ±(%+0.1Ω) Limit	Typical	Test Method
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/-55°C and +25°C/+125°C
Overload (Short time)	±2.0%	±0.50%	Rated voltage x 2.5 for 5 seconds
Resistance to Solder Heat	±1.0%	±0.25%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±1.0%	±0.50%	-55°C (30 minutes) / +125°C (30 minutes), 5 cycles
Moisture Resistance	±5.0%	±1.0%	40°C ± 2°C, 90-95% RH, 1000 hours, 1.5 hr ON / 0.5 hr OFF cycle
Endurance at 70°C	±5.0%	±0.50%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1.0%	±0.20%	+125°C, 1000 hours
Sulfuration Test	±5.0%	—	Soaked in industrial oil with 3.5% sulfur concentration 105°C ± 3°C, 500 hours

12/01/17