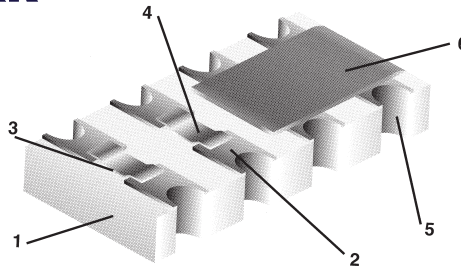


**THICK FILM R-NETWORK**  
**CONCAVE TERMINATIONS**  
**ANTI SULFURATION**  
**CN RT • CNZ RT**

**NEW**



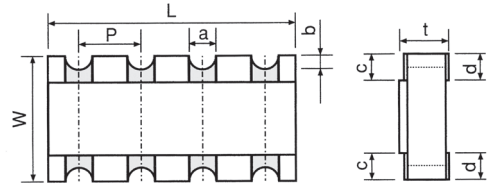
**STRUCTURE**

- 1 Ceramic substrate
- 2 Inner electrode
- 3 RuO<sub>2</sub> resistive film
- 4 Inner glass passivation
- 5 Outer electrode
- 6 Protective coating



**IDENTIFICATION**

TYPE	COATING COLOR	MARKING
CN RT	Black	White, 3 digits +2 marks
CNZ RT		



All these products have Pb-free terminations and meet EU-RoHS requirements

**TYPE DESIGNATION (HOW TO ORDER)**

CN	1J	4	RT	TD	103	J	Notes
PRODUCT CODE CN (Resistors) CNZ (Jumpers)	STYLE 1J, 2A, 2B	NO. OF RESISTORS 4	TERMINATION SURFACE MATERIAL RT: Sn	TAPING* TD, TE, BK	NOMINAL RESISTANCE** 3 digits	RESISTANCE TOLERANCE** J: (±5%)	Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS
				*Please see "PACKAGING"	** Blank in case of CNZ-series		

**DIMENSIONS (mm)**

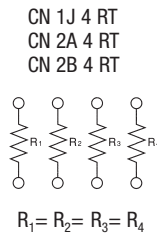
SIZE	TYPE	L ±0.2	W ±0.2	c	d ±0.1	t ±0.1	a (top)	a (bottom)	b ±0.1	P (ref.)
1206 (4 x 0603)	CN 1J 4 RT	3.2	1.6	0.3 ± 0.2	0.40		0.5 ± 0.1	0.4 ± 0.15		(0.80)
2008 (4 x 0805)	CN 2A 4 RT*	5.08	2.0	0.4 ± 0.2	0.55	0.6	0.8 ± 0.1	0.75 ± 0.1	0.15	(1.27)
2012 (4 x 1206)	CN 2B 4 RT*		3.2	0.5 ± 0.3						

\*Under Development

**FEATURES**

- Excellent anti-sulfuration characteristic due to using high sulfuration-proof inner top electrode material
- Less board space than individual chip resistors
- High cost reduction efficiency by eliminating mounter operations
- Higher self-alignment effect in reflow soldering process
- Suitable for image recognition systems due to square corner design
- Meets or exceeds IEC 60115-1, JIS C 5201-1
- Rated ambient temperature: +70°C
- Operating temperature range: -55°C ... +125°C
- Ideal for use as pull-up/pull-down resistors for digital circuits
- Suitable for reflow and wave soldering

**CIRCUIT CONSTRUCTION**



**RATING (Jumper)**

TYPE	MAXIMUM RESISTANCE	CURRENT RATING*
CNZ 1J 4 RT		0.5 A
CNZ 2A 4 RT	50 mΩ	
CNZ 2B 4 RT		1.0 A

\*at 70° C per element

**RATING**

SIZE	TYPE	T.C.R. (ppm/K)	POWER RATING (per element)**	MAX. WORKING VOLTAGE	MAX. OVERLOAD VOLTAGE	RESISTANCE RANGE
						J (±5%) E24
1206 (4 x 0603)	CN 1J 4 RT		0.063 W	50 V	100 V	
2008 (4 x 0805)	CN 2A 4 RT*	±200	0.1 W	100 V	200 V	10 Ω ... 1 MΩ
2012 (4 x 1206)	CN 2B 4 RT*		0.125 W	200 V	400 V	

\* Under Development

\*\* For resistors operated at an ambient temperature of +70°C or above, the power rating shall be derated.

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

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.

Rated voltage = √ Power rating x resistance value or max. working voltage, whichever is lower.

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.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order or use.