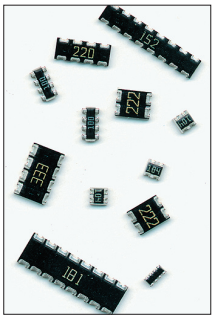
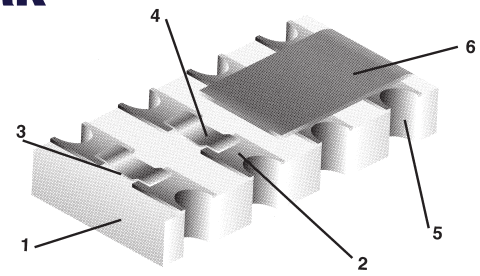
THICK FILM R-NETWORK

CONCAVE TERMINATIONS

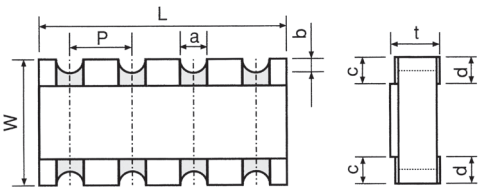
CN





STRUCTURE

1 Ceramic substrate
2 Inner electrode
3 RuO_2 resistive film
4 Inner glass passivation
5 Outer electrode
6 Protective coating



IDENTIFICATION

TYPE	COATING COLOR	MARKING
CN 1E	Black	None
CN 1J, 2A, 2B		White, 3 digits

Products with Pb-free terminations meet EU-RoHS requirements

TYPE DESIGNATION (HOW TO ORDER)

CN	2A	4	T	TE	101	J
PRODUCT CODE	STYLE 1E, 1J, 2A, 2B	NO. OF RESISTORS 2, 4, 8	TERMINATION SURFACE MATERIAL T: Sn (L: Sn/Pb)	TAPING* TD, TE, BK *Please see "PACKAGING"	NOMINAL RESISTANCE F: 4 digits G,J: 3 digits	TOLERANCE F: (±1%) G: (±2%) J: (±5%)

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

DIMENSIONS (mm)

SIZE	TYPE	L	W	c	d ±0.1	t	a (top)	a (bottom)	b	P (ref.)
0404 (2 x 0402) NEW	CN 1E 2	1.0 ± 0.1	1.0 ± 0.1	0.2 ± 0.1	0.25	0.35 ± 0.1	0.3 ± 0.1	0.3 ± 0.1	0.07 ± 0.05	(0.50)
0804 (4 x 0402)	CN 1E 4	2.0 ± 0.1				0.45 ± 0.1				
0606 (2 x 0603)	CN 1J 2	1.6 ± 0.2	1.6 ± 0.2	0.3 ± 0.2	0.40	0.6 ± 0.1	0.5 ± 0.1	0.4 ± 0.15	0.15 ± 0.01	(0.80)
1206 (4 x 0603)	CN 1J 4	3.2 ± 0.2								
2506 (8 x 0603)	CN 1J 8	6.4 ± 0.2								
1008 (2 x 0805)	CN 2A 2	2.54 ± 0.2	2.0 ± 0.2	0.4 ± 0.2	0.55		0.8 ± 0.1	0.75 ± 0.15		(1.27)
2008 (4 x 0805)	CN 2A 4	5.08 ± 0.2								
4008 (8 x 0805)	CN 2A 8	10.16 ± 0.2								
1012 (2 x 1206)	CN 2B 2	2.54 ± 0.2	3.2 ± 0.2	0.5 ± 0.3						
2012 (4 x 1206)	CN 2B 4	5.08 ± 0.2								
4012 (8 x 1206)	CN 2B 8	10.16 ± 0.2								

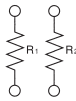
Contact our sales representatives before you use our products for applications including automotives, medical equipment and aerospace equipment. Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

FEATURES

- 2, 4 or 8 isolated resistor elements included in one array
- Less board space than individual chip resistors
- High cost reduction efficiency by eliminating mounter operations
- High self-alignment effect in reflow soldering process
- Suitable for image recognition systems due to square corner design
- Precision type ±1% is available
- CN1J4 parts are tested according to AEC-Q200 requirements
- Meets or exceeds IEC 60115-1, JIS C 5201-1
- Rated ambient temperature: +70°C
- Operating temperature range: -55°C ... +125°C (+155°C on request)
- Suitable for reflow and wave soldering

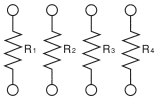
CIRCUIT CONSTRUCTION

CN1E2
CN1J2
CN2A2
CN2B2



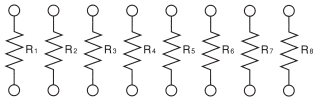
$R_1=R_2$

CN1E4
CN1J4
CN2A4
CN2B4



$R_1=R_2=R_3=R_4$

CN1J8
CN2A8
CN2B8



$R_1=R_2=R_3=R_4=R_5=R_6=R_7=R_8$

RATING

SIZE	TYPE	T.C.R. (ppm/K)*	POWER RATING (per element)**	MAX. WORKING VOLTAGE	MAX. OVERLOAD VOLTAGE	RESISTANCE RANGE F (±1%) E24 • E96	RESISTANCE RANGE G (±2%) E24	RESISTANCE RANGE J (±5%) E24
NEW 0404 (2 x 0402)	CN 1E 2	± 200: R ≥ 10 Ω ± 400: R < 10	0.063 W	25 V	50 V	–	–	10 Ω … 100 kΩ
0804 (4 x 0402)	CN 1E 4							
0606 (2 x 0603)	CN 1J 2			50 V	100 V	10 Ω… 1 MΩ	10 Ω … 1 MΩ	10 Ω … 1 MΩ
1206 (4 x 0603)	CN 1J 4*							1 Ω …1 MΩ
2506 (8 x 0603)	CN 1J 8							
1008 (2 x 0805)	CN 2A 2		0.1 W	100 V	200 V			10 Ω … 1 MΩ
2008 (4 x 0805)	CN 2A 4					–		
4008 (8 x 0805)	CN 2A 8							
1012 (2 x 1206)	CN 2B 2		0.125 V	200 V	400 V	10 Ω… 1 MΩ		
2012 (4 x 1206)	CN 2B 4							
4012 (8 x 1206)	CN 2B 8					–		

* CN1J4 (±1%) has TCR ±100ppm/K
** 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 = $\sqrt{\text{Power rating x resistance value}}$ or max. working voltage, whichever is lower.

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