

convex termination with square corners resistor array

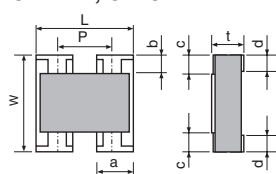


features

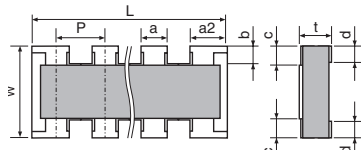
- Manufactured to type RK73 standards
- Less board space than individual chips
- Isolated resistor elements
- Convex terminations with square corners (CN_K)
- Flat termination with square corners (CN_N)
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified: CN1E4K and CN1J4K only

dimensions and construction

CN1E2K, CN1J2K



CN1E4K, CN1J4K, CN1F8K, CN1FN8K



Size Code	L	W	Dimensions inches (mm)						
	L	W	c	d	t	a	a 2	b	P
1E2K (0402x2)	.039±.004 (1.0±0.1)	.039±.004 (1.0±0.1)	.006±.004 (0.15±0.1)	.010±.004 (0.25±0.1)	.014±.004 (0.35±0.1)	.013±.004 (0.33±0.1)	—	.007±.002 (0.17±0.05)	.026 (0.67)
1E4K (0402x4)	.079±.004 (2.0±0.1)	.079±.004 (2.0±0.1)	.006±.004 (0.15±0.1)	.010±.008 (0.25±0.2)	.020±.004 (0.5±0.1)	.012±.006 (0.3±0.15)	.016±.006 (0.4±0.15)	.006±.004 (0.15±0.1)	.020 (0.5)
1J2K (0603x2)	.063±.006 (1.6±0.15)	.063±.006 (1.6±0.15)	.012±.008 (0.3±0.2)	.010±.004 (0.25±0.1)	.020±.004 (0.5±0.1)	.024±.006 (0.6±0.15)	—	.012±.004 (0.3±0.1)	0.031 (0.8)
1J4K (0603x4)	.126±.006 (3.2±0.15)	.126±.006 (3.2±0.15)	.012±.008 (0.3±0.2)	.010±.004 (0.25±0.1)	.020±.004 (0.5±0.1)	.020±.006 (0.5±0.15)	.026±.006 (0.65±0.15)	.006±.004 (0.15±0.1)	.020 (0.5)
1F8K 1FN8K (0602x8)	.149±.004 (3.8±0.1)	.063±.004 (1.6±0.1)	.012±.004 (0.3±0.1)	.012±.004 (0.3±0.1)	.018±.004 (0.45±0.1)	.012±.004 (0.30±0.1)	—	.006 (0.15)	.020 (0.5)

ordering information

CN	1J	4	K	T	TD	101	J
Type	Size	Elements	Terminal Convex	Termination Material	Packaging	Nominal Resistance	Tolerance
	1E 1J	2 4	K: Convex type with square corners N: Flat type with square corners	T: Sn (1E, 1J: Other termination styles may be available, please contact factory for options)	TD: 7" paper tape TDD: 10" paper tape	2 significant figures + 1 multiplier for ±5% 3 significant figures + 1 multiplier for ±1%	F: ±1% J: ±5%

CN	1F	N	8	K	T	TD	101	J
Type	Size	Marking	Elements	Terminal Convex	Termination Material	Packaging	Nominal Resistance	Tolerance
		Blank: Marking N: No Marking		K: Convex type with square corners	T: Sn (Other termination styles may be available, please contact factory for options)	TD: 7" paper tape	2 significant figures + 1 multiplier for ±5% 3 significant figures + 1 multiplier for ±1%	F: ±1% J: ±5%

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

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

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applications and ratings

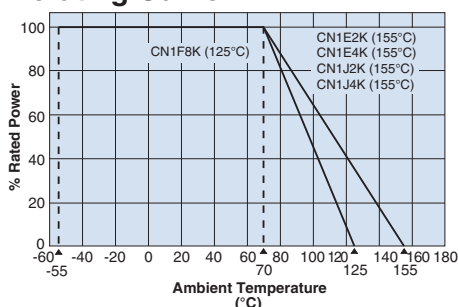
Part Designation	Power Rating @ 70°C (Per Element)	Rated Ambient Temp.	Rated Terminal Temp.	Resistance Range		T.C.R. (ppm/°C) Max.		Absolute Maximum Working Voltage	Maximum Overload Voltage (5 Secs. Max.)	Operating Temp Range
				E-24, E-96 (F±1%)	E-24 (J±5%)	(F±1%)	(J±5%)			
CN1E2K	1/16W (.063W)	+70°C	+125°C	10Ω - 100kΩ	10Ω - 1MΩ	±200:R≥10Ω	±200:R>10Ω ±400:R<10Ω	25V	50V	-55°C to +155°C
CN1E4K					1Ω - 1MΩ	±100:R≥10Ω		50V	100V	
CN1J2K						±200:R>10Ω ±400:R<10Ω		50V	100V	
CN1J4K						±200:R>10Ω ±400:R<10Ω		50V	100V	
CN1F8K	1/16W (.063W)	—	—	10Ω - 100kΩ	10Ω - 1MΩ	±200:R≥10Ω	±200:R>10Ω ±400:R<10Ω	25V	50V	-55°C to +125°C
CN1FN8K								25V	50V	

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

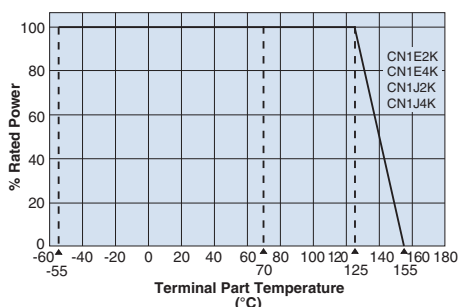
If any questions should arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature," please give priority to the "Rated Terminal Part Temperature." Prior to use and for more details refer to "Introduction of the derating curves on the terminal part temperature" in the beginning of the catalog.

environmental applications

Derating Curve



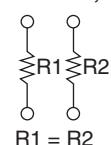
For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.



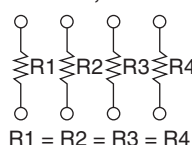
For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve. Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use.

circuit schematic

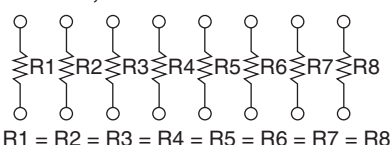
CN1E2K, CN1J2K



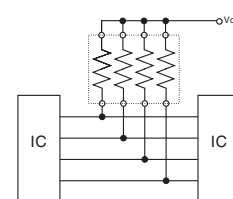
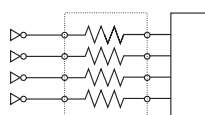
CN1E4K, CN1J4K



CN1F8K, CN1FN8K



Circuit Board Application



Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.1\Omega)$		Test Method
	Limit	Typical	
Resistance	Within regulated tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/-55°C, +25°C/+125°C
Overload (Short time)	±2.0%	±0.25%	Rated voltage x 2.5 for 5 seconds
Resistance to Solder Heat	±1.0%	±0.75%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±1.0%	±0.5%	-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%	±0.5%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1.0%	±0.15%: CN1F8K +0.25: All others	+125°C, 1000 hours: CN1F8K +155°C, 1000 hours: CN1E2K, CN1E4K, CN1J2K, CN1J4K

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