

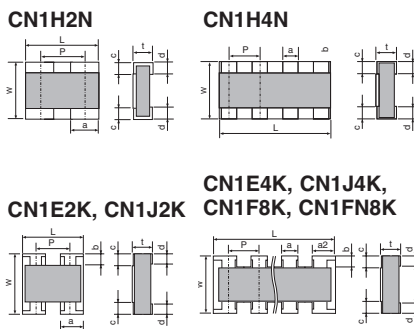
## convex termination with square corners resistor array



### 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)
- Marking: Body color black
  - 1FN8K, 1H, 1E no marking
  - 1F8K:  $\pm 1\%$ : white four-digit marking,  $\pm 5\%$ : white three-digit marking
  - 1J white three-digit marking
- 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: CN1J4K only

### dimensions and construction



Size Code	Dimensions inches (mm)								
	L	W	c	d	t	a	a 2	b	P
1H2N (0201x2)	.031 $\pm$ .004 (0.8 $\pm$ 0.1)	.024 $\pm$ .004 (0.6 $\pm$ 0.1)	.006 $\pm$ .004 (0.15 $\pm$ 0.1)	.006 $\pm$ .004 (0.15 $\pm$ 0.1)	.014 $\pm$ .004 (0.35 $\pm$ 0.1)	.012 $\pm$ .004 (0.3 $\pm$ 0.1)	—	—	.020 (0.5)
1H4N (0201x4)	.055 $\pm$ .004 (1.4 $\pm$ 0.1)	.024 $\pm$ .003 (0.6 $\pm$ 0.08)	.004 $\pm$ .003 (0.1 $\pm$ 0.08)	.008 $\pm$ .003 (0.2 $\pm$ 0.08)	.014 $\pm$ .004 (0.35 $\pm$ 0.1)	.008 $\pm$ .004 (0.2 $\pm$ 0.1)	—	—	.016 (0.4)
1E2K (0402x2)	.039 $\pm$ .004 (1.0 $\pm$ 0.1)	.039 $\pm$ .004 (1.0 $\pm$ 0.1)	.006 $\pm$ .004 (0.15 $\pm$ 0.1)	.010 $\pm$ .004 (0.25 $\pm$ 0.1)	.014 $\pm$ .004 (0.35 $\pm$ 0.1)	.013 $\pm$ .004 (0.33 $\pm$ 0.1)	—	.007 $\pm$ .002 (0.17 $\pm$ 0.05)	.026 (0.67)
1E4K (0402x4)	.079 $\pm$ .004 (2.0 $\pm$ 0.1)		.006 $\pm$ .004 (0.15 $\pm$ 0.1)	.010 $\pm$ .008 (0.25 $\pm$ 0.2)		.012 $\pm$ .006 (0.3 $\pm$ 0.15)	.016 $\pm$ .006 (0.4 $\pm$ 0.15)	.006 $\pm$ .004 (0.15 $\pm$ 0.1)	.020 (0.5)
1J2K (0603x2)	.063 $\pm$ .006 (1.6 $\pm$ 0.15)	.063 $\pm$ .006 (1.6 $\pm$ 0.15)	.012 $\pm$ .008 (0.3 $\pm$ 0.2)	.010 $\pm$ .004 (0.25 $\pm$ 0.1)	.020 $\pm$ .004 (0.5 $\pm$ 0.1)	.024 $\pm$ .006 (0.6 $\pm$ 0.15)	—	.012 $\pm$ .004 (0.3 $\pm$ 0.1)	0.031 (0.8)
1J4K (0603x4)	.126 $\pm$ .006 (3.2 $\pm$ 0.15)					.020 $\pm$ .006 (0.5 $\pm$ 0.15)	.026 $\pm$ .006 (0.65 $\pm$ 0.15)		
1F8K 1FN8K (0602x8)	.149 $\pm$ .004 (3.8 $\pm$ 0.1)	.063 $\pm$ .004 (1.6 $\pm$ 0.1)	.012 $\pm$ .004 (0.3 $\pm$ 0.1)	.012 $\pm$ .004 (0.3 $\pm$ 0.1)	.018 $\pm$ .004 (0.45 $\pm$ 0.1)	.012 $\pm$ .004 (0.30 $\pm$ 0.1)	—	.006 (0.15)	.020 (0.5)

### ordering information

New Part #	CN	1J	4	K	T	TD	101	J
Type	Type	Size	Elements	Terminal Convex	Termination Material	Packaging	Nominal Resistance	Tolerance
		1H 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 $\pm 5\%$ 3 significant figures + 1 multiplier for $\pm 1\%$	F: $\pm 1\%$ J: $\pm 5\%$

New Part #	CN	1F	N	8	K	T	TD	101	J
Type	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 $\pm 5\%$ 3 significant figures + 1 multiplier for $\pm 1\%$	F: $\pm 1\%$ J: $\pm 5\%$

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.

2/26/15

## applications and ratings

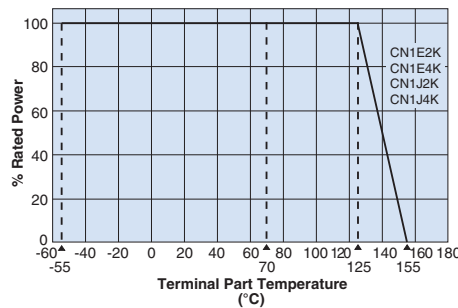
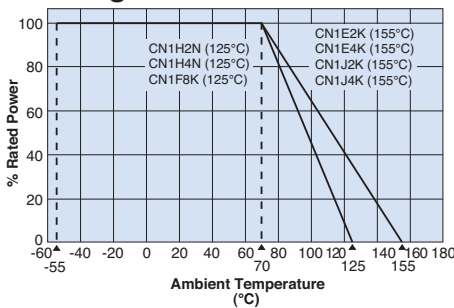
Part Designation	Power Rating @ 70°C (Per Element)	Resistance Range		T.C.R. (ppm/°C) Max.		Absolute Maximum Working Voltage	Maximum Overload Voltage (5 Secs. Max.)	Rated Terminal Temperature	Operating Temperature Range
		E-24, E-96 (F±1%)	E-24 (J±5%)	E-24, E-96 (F±1%)	E-24 (J±5%)				
CN1H2N	1/32W (.031W)	—	10Ω - 1MΩ	—	—	12.5V	25V	—	-55°C to +125°C
CN1H4N									
CN1E2K	1/16W (.063W)	10Ω - 100kΩ	10Ω - 1MΩ	±200:R≥10Ω	±200:R>10Ω ±400:R<10Ω	25V	50V	+125°C	-55°C to +155°C
CN1E4K				±100:R≥10Ω		50V	100V		
CN1J2K				±100:R≥10Ω		50V	100V		
CN1J4K				±100:R≥10Ω		50V	100V		
CN1F8K	1/16W (.063W) 0.25W per package	10Ω - 100kΩ	10Ω - 1MΩ	±200:R≥10Ω	—	25V	50V	—	-55°C to +125°C
CN1FN8K									

Rated ambient temperature: +70°C

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

## environmental applications

### Derating Curve

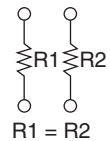


For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve. Please refer to "Introduction of the derating curve based on the terminal part temperature" on the beginning of our catalog before use.

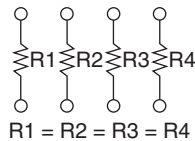
For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

## circuit schematic

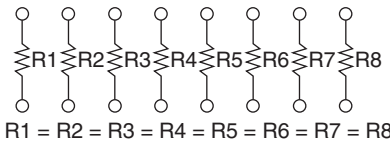
CN1H2N, CN1E2K, CN1J2K



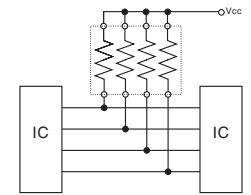
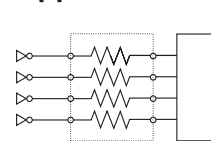
CN1H4N, CN1E4K, CN1J4K



CN1F8K, CN1FN8K



## Circuit Board Application



## Performance Characteristics

Parameter	Requirement Δ R		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%: CN1H2N, CN1H4N, CN1F8K +0.25: All others	+125°C, 100 hours: CN1H2N, CN1H4N, CN1F8K +155°C, 100 hours: CN1E2K, CN1E4K, CN1J2K, CN1J4K

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

2/23/15