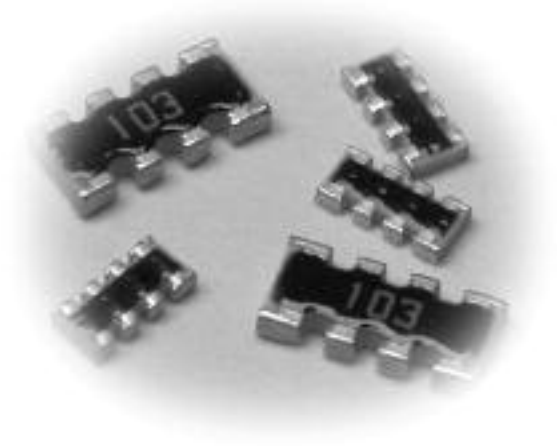
KOA SPEER ELECTRONICS, INC.

CN___KIN

convex termination with square corners resistor array

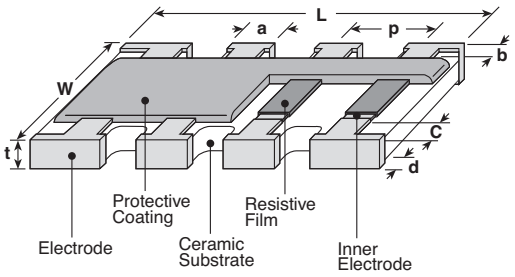
EU RoHS COMPLIANT



features

- Manufactured to type RK73 standards
- Less board space than individual chips
- Isolated resistor elements
- Convex terminations with square corners
- Marking: Body color black
  1FN8K, 1H, 1E no 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.

dimensions and construction



Size Code	Dimensions inches (mm)							
	L	W	C	d	t	a (ref.)	b (ref.)	p (ref.)
1H2N (0201x2)	.031±.004 (0.8±0.1)	.024±.004 (0.6±0.1)	.006±.004 (0.15±0.1)	.006±.004 (0.15±0.1)	.014±.004 (0.35±0.1)	.012±.004 (0.3±0.1)	—	.020 (0.5)
1H4N (0201x4)	.055±.004 (1.4±0.1)	.024±.003 (0.6±0.08)	.004±.003 (0.1±0.08)	.008±.003 (0.2±0.08)	.014±.004 (0.35±0.1)	.008±.004 (0.2±0.1)	—	.016 (0.4)
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)		.006±.004 (0.15±0.1)	.010±.008 (0.25±0.2)		.012±.006 (0.3±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)					.020±.006 (0.5±0.15)		
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

New Part #

CN	1J	4		K	T	TD	101	J
Type	Size	Elements	1F8 Marking	Terminal Convex	Termination Material	Packaging	Nominal Resistance	Tolerance
	1H 1E 1J 1F	2 4 8	Blank: Marking N: No Marking	K: Convex type with square corners N: Flat type with square corners	T: Sn (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%

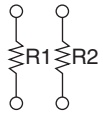
For further information on packaging, please refer to Appendix A.

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

12/17/12

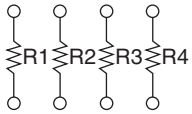
circuit schematic

CN1H2N, CN1E2K, CN1J2K



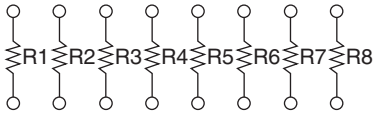
R1 = R2

CN1H4N, CN1E4K, CN1J4K



R1 = R2 = R3 = R4

CN1F8K, CN1FN8K



R1 = R2 = R3 = R4 = R5 = R6 = R7 = R8

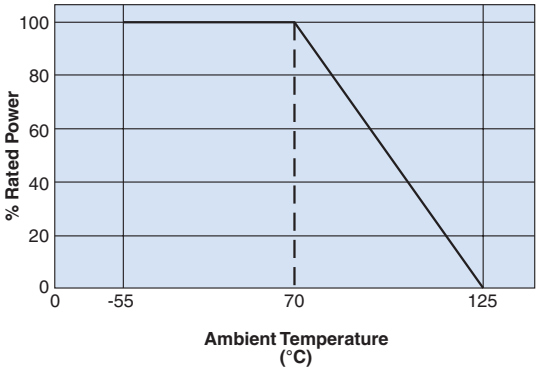
applications and ratings

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

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

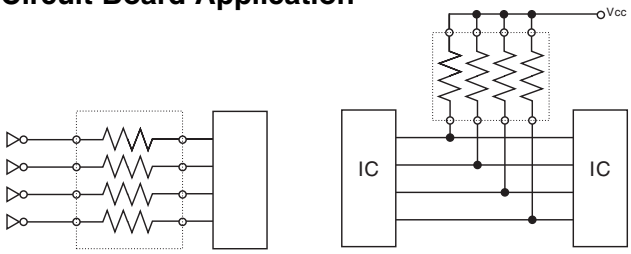
environmental applications

Derating Curve



For resistors operated at 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 Limit	Requirement Δ R Typical	Test Method
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%	+125°C, 100 hours

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