

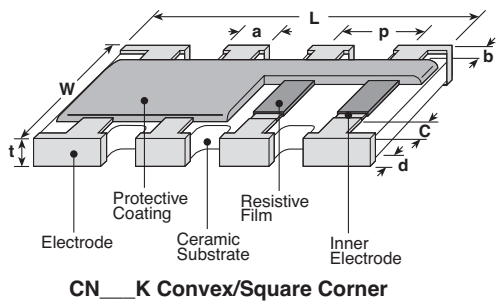
Flat Chip Resistor Array Type CN_K/N

ISO 9001:2008
TS-16949

1. Features

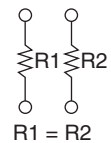
- Manufactured to Type RK73 standards
- Less board space than individual chips
- Isolated resistor elements
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- Convex terminations with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

2. Dimensions

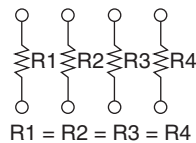


Size Code	Dimensions inches (mm)							
	L	W	C	d	t	a (ref.)	b (ref.)	p (ref.)
1H2N (0201x2)	.031±.004 (0.8±0.1)	.024±.004 (0.6±0.1)	.006±.004 (0.15±0.1)	.006±.004 (0.15±0.1)	.014±.004 (0.35±0.1)	.012±.004 (0.3±0.1)	—	.020 (0.5)
1H4N (0201x4)	.055±.004 (1.4±0.1)	.024±.003 (0.6±0.08)	.004±.003 (0.1±0.08)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

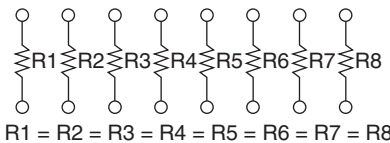
CN1H2N, CN1E2K,
CN1J2K



CN1H4N, CN1E4K,
CN1J4K

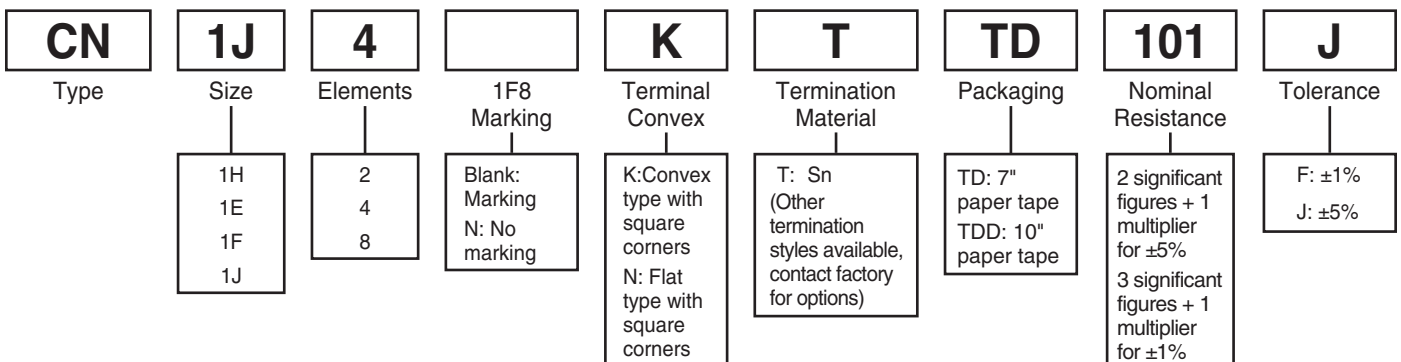


CN1F8K, CN1FN8K



3. Type Designation

The type designation shall be the following form:



4. Standard Applications

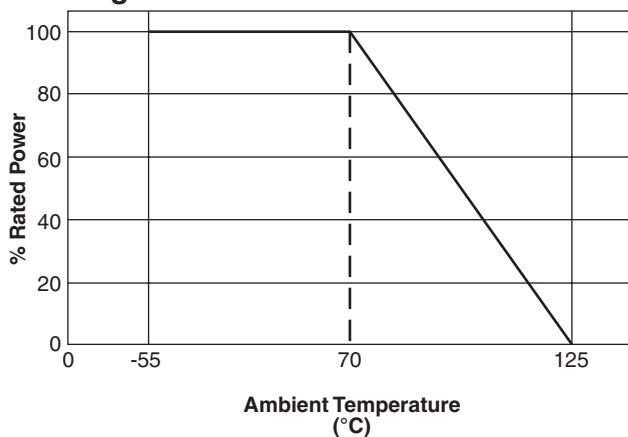
Part Designation	Power Rating @ 70°C (Per Element)	T.C.R. (ppm/°C) Max.	Resistance Range E-24, E-96 (F±1%)	Resistance Range E-24 (J±5%)	Absolute Maximum Working Voltage	Maximum Overload Voltage (5 Secs. Max.)	Operating Temperature Range
CN1H2N CN1H4N	1/32W (.031W)	±200:R>10Ω ±400:R<10Ω	—	10Ω - 1MΩ	12.5V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

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

5. Environmental Applications

For temperature in excess of 70°C, the load shall be derated in accordance with the following figure.

Derating Curve



5.1 Voltage Rating

Resistors shall have a rated direct current (DC) continuous working voltage or an approximate sine wave root mean square (RMS) alternating current (AC) continuous working voltage at a commercial line frequency and wave form corresponding to the power rating, as determined from the following formula:

In no case shall the rated DC or RMS AC continuous working voltage be greater than the applicable maximum value.

$E = \sqrt{P \times R}$	Where,	E = Rated voltage (V)
		P = Power rating (W)
		R = Nominal resistance (Ω)

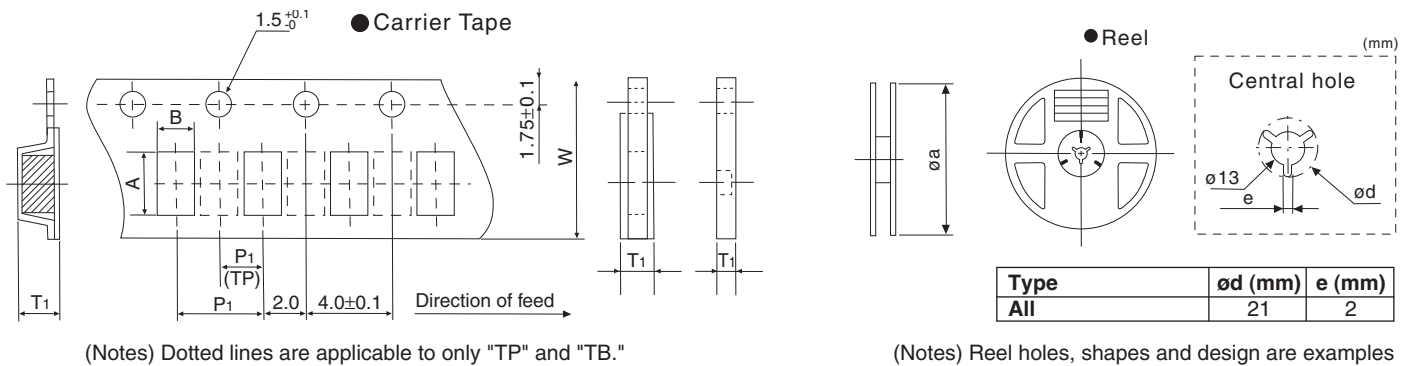
6. Characteristics

Parameter	Requirement ΔR		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%	+125°C, 100 hours

8. Packaging Specifications

8.1 Paper Tape Dimensions

Type	Component Size (mm)			Carrier Tape	Quantity/ Reel (Pieces)	Taping (mm)					Reel Size	
	L	W	T			A	B	W	P1	T1		
CN_K	1F8	3.8±0.1	1.6±0.2	0.44±0.1	TP	5000	4.0±0.1	1.8±0.1	8.0±0.2	2.0±0.05	0.55±0.1	178
	1E2K	1.00	1	0.35	TP	10000	1.2±0.1	1.2±0.1	8.0±0.2	2.0±0.05	0.45±0.1	178
	1E4/1E4K	1.60	1.6	0.6/0.5	TP	10000	2.2±0.1	1.2±0.1	8.0±0.2	2.0±0.05	0.45±0.1	178
	TD				5000	1.9±0.1	1.9±0.1	8.0±0.2	4.0±0.1	0.6+0.2/-0 0.75+0.2/-0/	178	
	TDD				10000	1.9±0.1	1.1±0.1	8.0±0.2	4.0±0.1	0.6+0.2/-0 0.75+0.2/-0/	255	
	TD				5000	3.5±0.1	2.0±0.1	8.0±0.2	4.0±0.1	0.75+0.2/-0/	178	
1J4/1J4K	3.20	0.6/0.5	0.6/0.5	TDD	10000	1.9±0.1	1.1±0.1	8.0±0.2	4.0±0.1	0.75+0.2/-0/	0.6+0.2/-0	255



9. Body Color

9.1 Body Convex

Body Color: Black
 Marking Color: 1FN8K, 1H, 1E no marking
 1J white three-digit marking

9.2 Marking

±5% 3-digit number 103 → 10000Ω → 10kΩ
 ±1% 4-digit number 1002 → 10000Ω → 10kΩ

