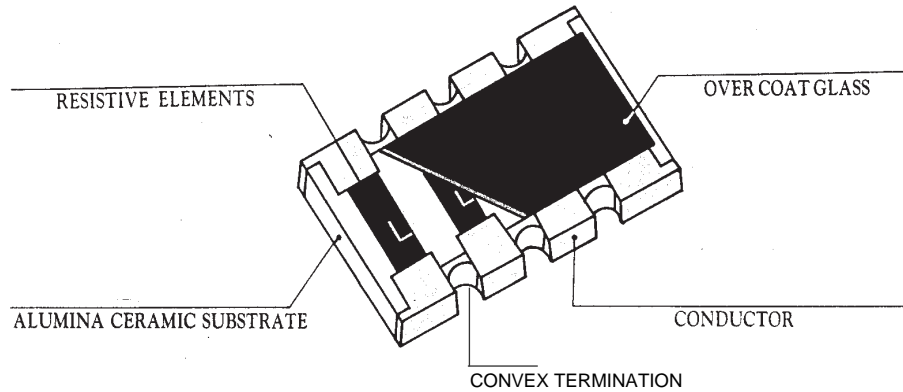


Thick Film Chip Resistor Arrays

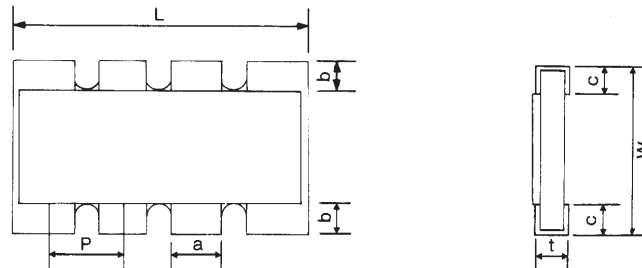
CONSTRUCTION

FEATURES

- High Density
- Automatic Placement
- Convex



DIMENSIONS IN MM



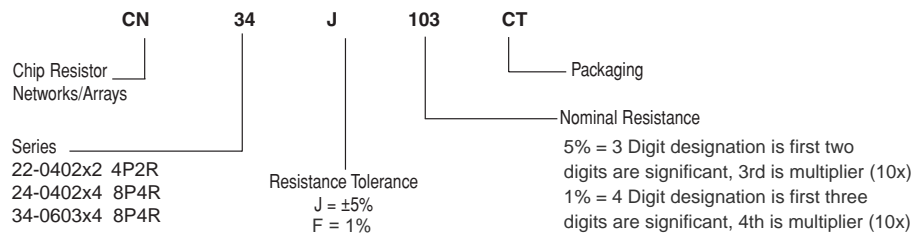
Unit: mm

TYPE	L	W	t	P	a	b	c
CN34	3.2±0.1	1.6±0.15	0.55±0.1	0.8±0.5	0.45±0.1	0.3±0.2	0.3±0.2
CN24	2.0±0.1	1.0±0.1	0.4±0.1	0.5±0.05	0.3±0.1	0.15±0.1	0.25±0.2
CN22	1.0±0.1	1.0±0.1	0.35±0.1	0.65±0.05	0.3±0.1	0.15±0.1	0.25±0.2

RATING

TYPE	Power Rating at 70°C	Max Working Voltage	Max Overload Voltage	Operating Temp. (°C)	Resistance Tolerance	Resistance Range (Ω)	Temp Coefficient ppm/°C
CN34	1/16W	50V	100V	-55~+125°C	F±1% J±5%	0Ω~1MΩ	±200ppm/°C
CN24 CN22	1/16W	50V	100V	-55~+125°C	F±1% J±5%	0Ω~1MΩ	±250ppm/°C

Ordering Information



Note: Calchip has completed the Lead Free transition. All parts shipped with or without the "customer designator" LF at the end of the part number will be Lead-Free. Lead-Free material will still continue to have an LF at the end of the Lot Code and a green RoHS symbol on the label. Please contact your sales associate if you require non-RoHS material.

Thick Film Chip Resistor Arrays

1.0 Number of Element

Depend on its element's number. (2-2 element. 4-4 element)

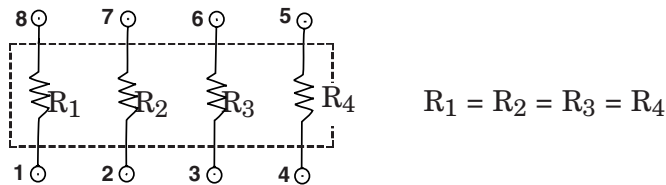
2.0 Resistance Tolerance

F: ±1% J: ±5%

3.0 Nominal Resistance

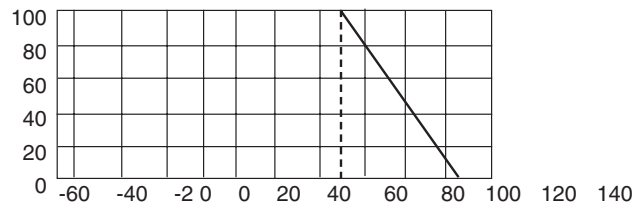
Example: 103, 10 is effective digit, 3 is a multiple which represents the cube of 10, zero number is three.

4.0 Schematics



5.0 Power Derating Curve

The resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the curve in Figure 1.



5.1 Rated Voltage

The value of rated voltage shall be determined from formula (1).

$$E = \sqrt{P \times R} \dots (1)$$

E = Rated Voltage (V)

P = Power Rating (W)

R = Nominal Resistance (Ω)

6.0 Electrical / Machine Characteristics and Test Methods

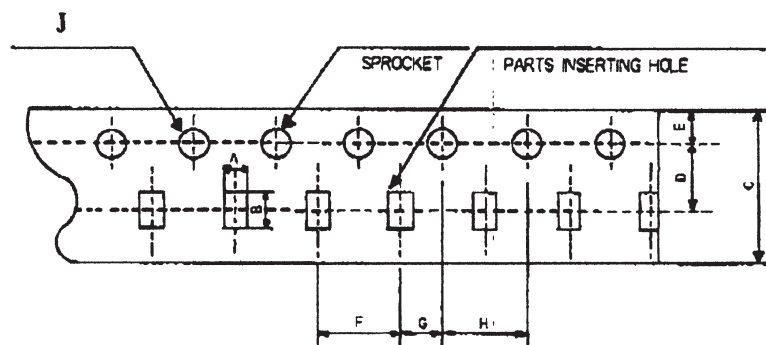
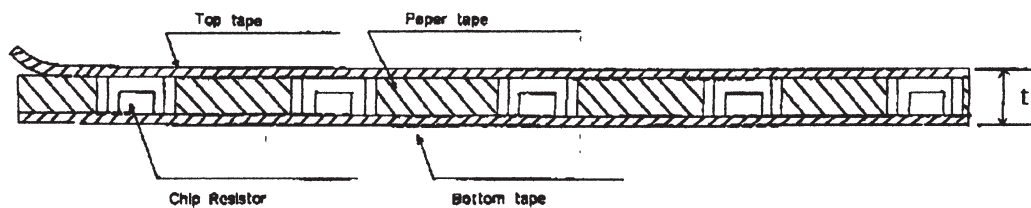
Item	Specifications	Test Methods
Temperature Coefficient	TCR: ±200 ppm	Inspection Temp. Cold: +25°C~-55°C Hot: +25°C~+125°C
Short Time Overload	±(2%+0.05 Ω)	1. Apply 2.5 x rated voltage for 5 sec. 2. Wait 30 minutes 3. Measure resistance value
Load Life	±(3%+0.05 Ω)	1. Dwell in chamber at 70±2°C for ON: 90 min. at rated voltage; then OFF: 30 min. 2. Perform 1,000 hours cyclically
Load Life in Humidity	±(3%+0.05 Ω)	1. Dwell in humidity chamber at 40 ±2°C and 95% RH for ON: 90 min. at rated voltage; then OFF: 30 min. 2. Perform 1,000 hours cyclically
Temperature Cycling	±(1%+0.05 Ω)	1. -55±3°C~125±3°C, make 5 cycles. 2. Released 1 hour in room temp., then measure value.
Effect of Soldering	±(2.5%+0.05 Ω) Non-damage by machinery	1. Immersed in molten solder at 270±5°C for 10±.01 sec. 2. Released 1 hour in room temp., then measure value.
Solderability	95% coverage min.	1. Immersed in rosin solution for 5~10 seconds. 2. Re-immersed in solder pot at 230±5°C for 3±0.5 sec
Intermittent Overload	±(5%+0.1 Ω)	1. Perform 10,000 voltage cycles as follows: ON (2.5 x rated voltage or current) 1 sec. and OFF 25 sec. 2. Released 30 min. without loading. 3. Measure resistance.
Dielectric Withstanding Voltage	No evidence of mechanical damage	Apply 300VAC for 1 second
Insulation Resistance	10 ⁸ Ω min	Apply 100VDC.

Thick Film Chip Resistor Arrays

Taping Specification

Carrier Tape

Unit in mm

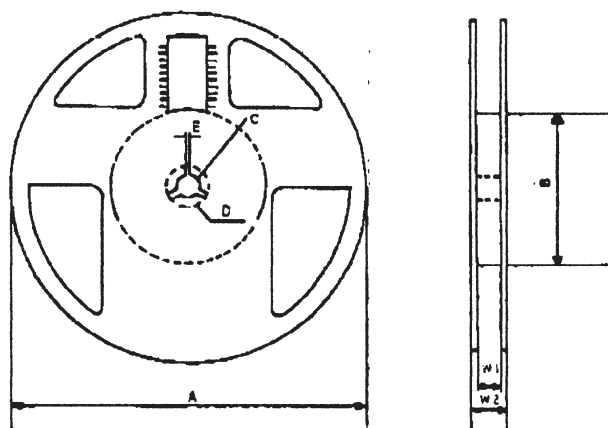
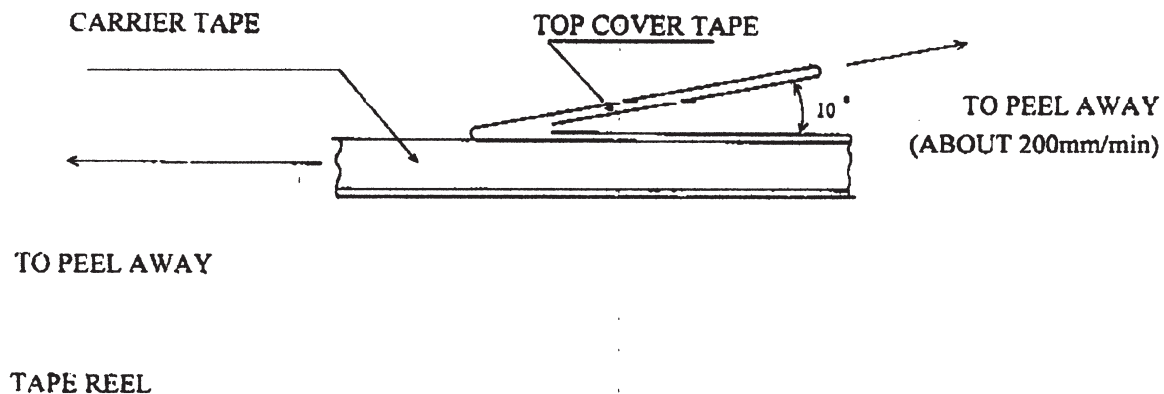


Paper Tape

Type		A	B	C	D	E	F	G	H	J	t
CN34	5,000	2.0±0.2	3.6±0.2	8.0±0.1	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.1	1.5±0.1	1.0
CN24	10,000	2.0±0.15	2.4±0.2	8.0±0.2	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.1	1.5±0.1/-0	.84±.01

Thick Film Chip Resistor Arrays

The top fixed tape for each carrier shall have an adhesion peel strength of 10 to 50g, measure methods is shown below to peel away.



Type	A	B	C	D	E	W1	W2
CN34	$\phi 178 \pm 2.0$	$\phi 80 \pm 2.0$	$\phi 13 \pm 0.5$	$\phi 21.0$	2.0 ± 0.5	10.0 ± 1.0	12.5 ± 1.0
CN24	$\phi 178 \pm 2.0$	$\phi 80 \pm 2.0$	$\phi 13 \pm 0.5$	$\phi 21.0$	2.0 ± 0.5	10.0 ± 1.0	12.5 ± 1.0
CN22	$\phi 178 \pm 2.0$	$\phi 80 \pm 2.0$	$\phi 13 \pm 0.5$	$\phi 21.0$	2.0 ± 0.5	9.0 ± 1.0	11.4 ± 2.0