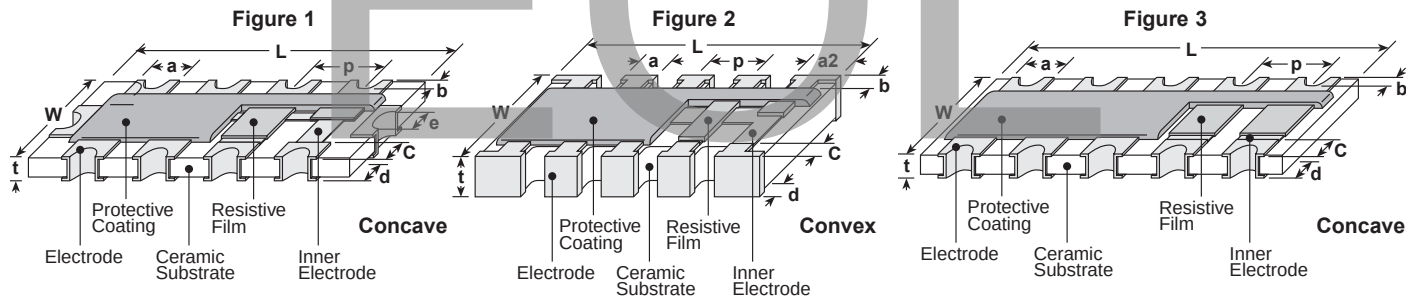


## features

- Manufactured to type RK73 standards
- Concave or convex terminations
- Less board space than individual chips
- Eight bussed resistor elements included in one array
- 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 | Figure No. | Dimensions inches (mm)  |                         |                          |                          |                         |                         |                          |                         |                         |                         |                |
|-----------|------------|-------------------------|-------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|----------------|
|           |            | L                       | W                       | C                        | d                        | e                       | t                       | a (top)                  | a2                      | a (bot.)                | b                       | p              |
| 1J10VK    | 2          | .126±.004<br>(3.2±0.1)  | .063±.004<br>(1.6±0.1)  | .012±.008<br>(0.3±0.2)   | .012±.004<br>(0.3±0.1)   | —                       | .020±.004<br>(0.5±0.1)  | .016±.004<br>(0.4±0.1)   | —                       | .012<br>(0.3)           | —                       | .025<br>(0.64) |
| 1J10K     | 2          | .126±.004<br>(3.2±0.1)  | .063±.004<br>(1.6±0.1)  | .012±.008<br>(0.3±0.2)   | .012±.004<br>(0.3±0.1)   | —                       | .020±.004<br>(0.5±0.1)  | .016±.004<br>(0.4±0.1)   | .022±.004<br>(0.55±0.1) | .012±.008<br>(0.3±0.2)  | —                       | .025<br>(0.64) |
| 1J10Y     | 1          | .126±.006<br>(3.2±0.15) | .063±.006<br>(1.6±0.15) | .008±.004<br>(0.2±0.1)   | .014±.004<br>(0.35±0.1)  | .016±.006<br>(0.4±0.15) | .022±.004<br>(0.55±0.1) | .013±.006<br>(0.33±0.15) | —                       | .012±.004<br>(0.3±0.1)  | .004<br>(0.1)           | .031<br>(0.8)  |
| 2A10Y     |            | .157±.008<br>(4.0±0.2)  | .083±.008<br>(2.1±0.2)  | .010±.008<br>(0.25±0.2)  | .016±.008<br>(0.4±0.2)   | .020±.008<br>(0.5±0.2)  | .024±.004<br>(0.6±0.1)  | .020±.008<br>(0.5±0.2)   | —                       | .016±.006<br>(0.4±0.15) | .006±.004<br>(0.15±0.1) | .031<br>(0.8)  |
| 2B10V     | 3          | .252±.008<br>(6.4±0.2)  | .122±.008<br>(3.1±0.2)  | .014±.006<br>(0.35±0.15) | .022±.006<br>(0.55±0.15) | —                       | .024±.004<br>(0.6±0.1)  | .024±.004<br>(0.6±0.1)   | —                       | .024±.006<br>(0.6±0.15) | .006±.004<br>(0.15±0.1) | 0.05<br>(1.27) |
| 2B10      |            |                         |                         |                          |                          |                         |                         |                          |                         |                         |                         |                |



## ordering information

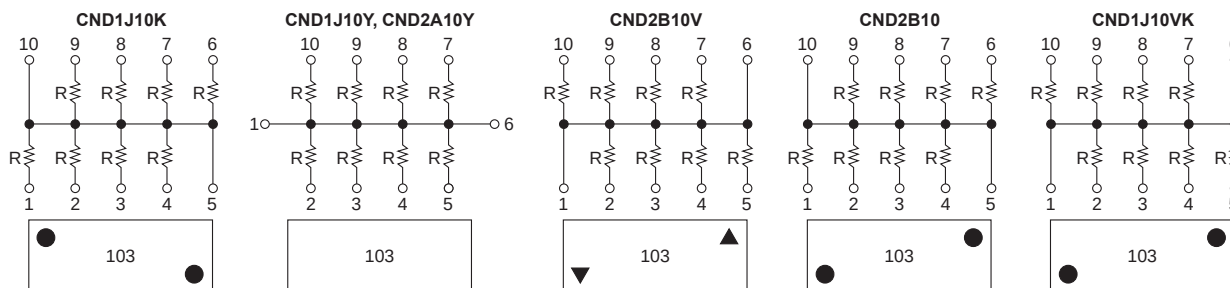
|          |                |          |                                                                            |                                                                                          |                                                                                          |                                      |                                      |           |
|----------|----------------|----------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------|-----------|
| Convex:  |                |          |                                                                            |                                                                                          |                                                                                          |                                      |                                      |           |
| CND      | 1J             | 10       | V                                                                          | K                                                                                        | T                                                                                        | TD                                   | 103                                  | J         |
| Type     | Size           | Elements | Circuit Symbol                                                             | Terminal Symbol                                                                          | Termination Material                                                                     | Packaging                            | Nominal Resistance                   | Tolerance |
|          | 1J             | 10       | V: Reverse common electrode<br>Blank: Standard                             | K: Convex type                                                                           | T: Sn<br>(Other termination styles may be available, please contact factory for options) | TD: 7" paper tape                    | 2 significant figures + 1 multiplier | J: ±5%    |
| Concave: |                |          |                                                                            |                                                                                          |                                                                                          |                                      |                                      |           |
| CND      | 2B             | 10       | V                                                                          | T                                                                                        | TE                                                                                       | 103                                  | J                                    |           |
| Type     | Size           | Elements | Circuit Symbol                                                             | Termination Material                                                                     | Packaging                                                                                | Nominal Resistance                   | Tolerance                            |           |
|          | 1J<br>2A<br>2B | 10       | V: Reverse common electrode<br>Y: Side common electrode<br>Blank: Standard | T: Sn<br>(Other termination styles may be available, please contact factory for options) | TD: 7" paper tape<br>TE: 7" embossed plastic                                             | 2 significant figures + 1 multiplier | 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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## circuit schematics and markings



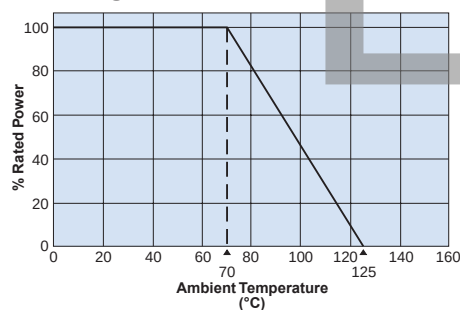
## applications and ratings

| Part Designation | Power Rating @ 70°C (Per Element) | T.C.R. (ppm/°C) Max. | Resistance Range E-12 | Resistance Tolerance | Absolute Maximum Working Voltage | Maximum Overload Voltage (5 Secs. Max.) | Rated Ambient Temperature | Operating Temperature Range |
|------------------|-----------------------------------|----------------------|-----------------------|----------------------|----------------------------------|-----------------------------------------|---------------------------|-----------------------------|
| CND1J10VK        | .031                              | ±200                 | 47Ω - 39kΩ            | J: ±5%               | 25V                              | 50V                                     | +70°C                     | -55°C to +125°C             |
| CND1J10K         |                                   |                      | 22Ω - 39kΩ            |                      |                                  |                                         |                           |                             |
| CND1J10Y         | .05                               |                      | 100Ω - 100kΩ          |                      | 50V                              | 100V                                    |                           |                             |
| CND2A10Y         | .063                              |                      |                       |                      |                                  |                                         |                           |                             |
| CND2B10V         |                                   |                      |                       |                      |                                  |                                         |                           |                             |
| CND2B10          |                                   |                      |                       |                      |                                  |                                         |                           |                             |

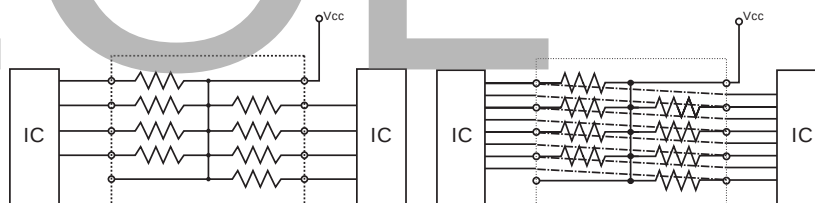
\* Note that network resistors generate higher heat rather than single flat chip resistors even under rated power output

## environmental applications

### Derating Curve



### Circuit Board Application



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.

## Performance Characteristics

| Parameter                   | Requirement $\Delta R \pm(\%+0.1\Omega)$ | Limit | Typical                          | Test Method                                                      |
|-----------------------------|------------------------------------------|-------|----------------------------------|------------------------------------------------------------------|
| Resistance                  | Within specified tolerance               |       | —                                | 25°C                                                             |
| T.C.R.                      | Within specified T.C.R.                  |       | —                                | +25°C/-55°C, +25°C/+125°C                                        |
| Overload (Short time)       | ±2.0%                                    |       | ±0.5%                            | Rated voltage x 2.5 for 5 seconds                                |
| Resistance to Solder Heat   | ±1.0%                                    |       | Convex: ±0.2%<br>Concave: ±0.25% | 260°C ± 5°C, 10 seconds ± 1 second                               |
| Rapid Change of Temperature | ±1.0%                                    |       | Convex: ±0.1%<br>Concave: ±0.25% | -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%                                    |       | Convex: ±0.5%<br>Concave: ±1%    | 70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle              |
| High Temperature Exposure   | ±1.0%                                    |       | ±0.2%                            | +125°C, 1000 hours                                               |

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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