

## Metal Oxide Resistors, Special Purpose, High Voltage



### FEATURES

- Low TC:  $\pm 200$  ppm/ $^{\circ}\text{C}$  standard;  $\pm 100$  ppm/ $^{\circ}\text{C}$ ,  $\pm 50$  ppm/ $^{\circ}\text{C}$  available
- $\pm 1\%$  standard to  $1\text{ G}\Omega$ ;  $\pm 5\%$  above  $1\text{ G}\Omega$   
 $\pm 0.5\%$  available in  $\pm 50$  ppm/ $^{\circ}\text{C}$  only. Special tolerance and/or temperature coefficient matching available.
- High Voltage type (up to  $8\text{ kV}$ )
- For oil bath or open air operation
- Matched sets available
- Special testing available upon request
- Lead (Pb)-free version is RoHS compliant



**RoHS\***  
COMPLIANT

### STANDARD ELECTRICAL SPECIFICATIONS

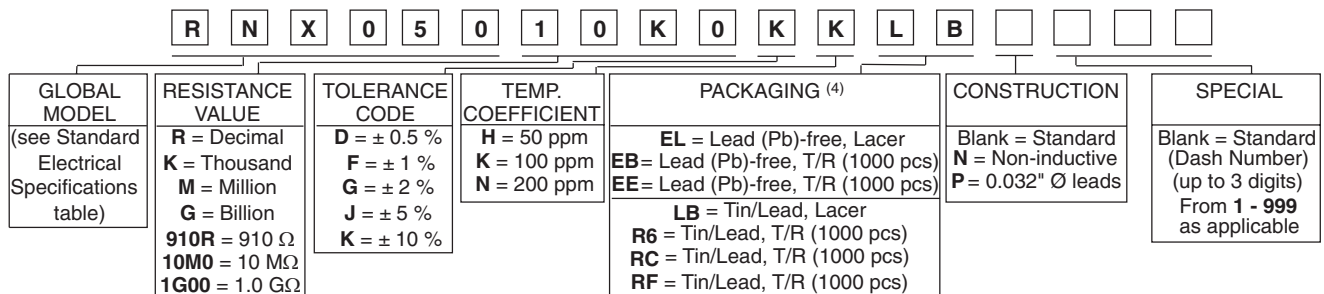
| GLOBAL MODEL | HISTORICAL MODEL | POWER RATING                                 |  |   | VOLTAGE RATING<br>$V_{\equiv}$ | RESISTANCE RANGE $\Omega$ <sup>(2)</sup> |           |           |                              |
|--------------|------------------|--|--|---|--------------------------------|--|-----------|-----------|------------------------------|
|              |                  | $P_{25^{\circ}\text{C}}$<br>W <sup>(1)</sup> | $P_{70^{\circ}\text{C}}$<br>W <sup>(1)</sup> | $P_{125^{\circ}\text{C}}$<br>W <sup>(1)</sup> |                                | 200 ppm                                  | 100 ppm   | 50 ppm    | NON-INDUCTIVE <sup>(3)</sup> |
| RNX025       | RNX-1/4          | 0.5  | 0.36   | 0.25  | 750 V                          | 1K - 100M                                | 1K - 100M | 1M - 22M  | 100R - 100K                  |
| RNX038       | RNX-3/8          | 1.0  | 0.72   | 0.5   | 1.5 kV                         | 1K - 1G                                  | 1K - 100M | 1M - 50M  | 100R - 100K                  |
| RNX050       | RNX-1/2          | 1.2  | 0.86   | 0.6   | 2 kV                           | 1K - 2G                                  | 1K - 250M | 1M - 100M | 100R - 100K                  |
| RNX075       | RNX-3/4          | 2.0  | 1.44   | 1.0   | 3 kV                           | 1K - 2G                                  | 1K - 500M | 1M - 100M | 100R - 100K                  |
| RNX100       | RNX-1            | 2.5  | 1.8  | 1.25  | 4 kV                           | 1K - 2G                                  | 1K - 500M | 1M - 100M | 100R - 1M                    |
| RNX125       | RNX-1-1/4        | 3.0  | 2.16   | 1.5   | 5 kV                           | 1K - 2G                                  | 1K - 500M | -         | 100R - 1M                    |
| RNX150       | RNX-1-1/2        | 4.0  | 2.88   | 2.0   | 6 kV                           | 1K - 2G                                  | 1K - 500M | -         | 100R - 1M                    |
| RNX200       | RNX-2            | 5.0  | 3.6  | 2.5   | 8 kV                           | 1K - 2G                                  | 1K - 500M | -         | 100R - 1M                    |

**Notes:**

- <sup>(1)</sup> Increase wattage by 25 % for 0.032" [0.813 mm] diameter leads
- <sup>(2)</sup> For resistance values above and below those listed please contact us
- <sup>(3)</sup> Non inductive  $\pm 200$  ppm/ $^{\circ}\text{C}$  TCR only
- **All resistance values are calibrated at 100 VDC. Calibration at other voltages available**
- Part Marking: print marked - DALE, model, value, tolerance, TCR, date code (model and date omitted on RNX-1/4)
- Special Modifications:
  - Special preconditioning (power aging, temperature cycling etc.) to customer specifications
  - Non-helixed resistors can be supplied for critical high frequency applications (non-inductive)

### GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: RNX05010K0KKLB (preferred part numbering format)



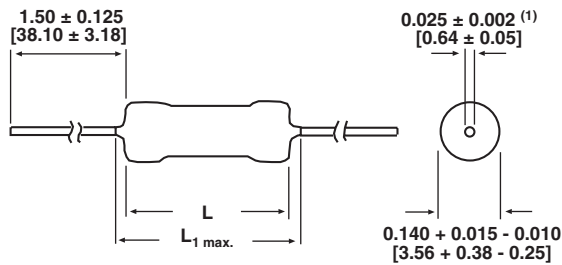
Historical Part Number example: RNX-1/210K0KK (will continue to be accepted)



**Notes:**

- <sup>(4)</sup> Some packaging codes are model specific
- \* Pb containing terminations are not RoHS compliant, exemptions may apply.

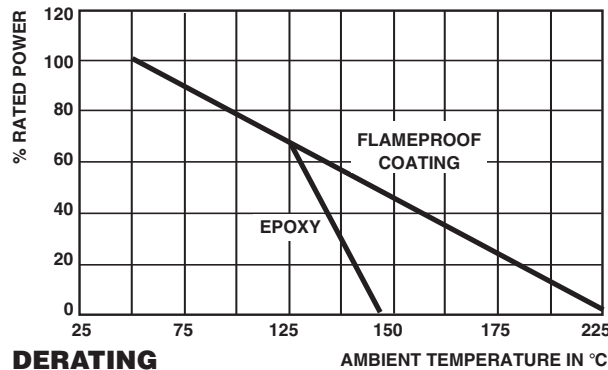
**DIMENSIONS**



| GLOBAL MODEL | DIMENSIONS in inches [millimeters] |                     |
|--------------|------------------------------------|---------------------|
|              | L                                  | L <sub>1</sub> max. |
| RNX025       | 0.290 ± 0.020 [7.37 ± 0.51]        | 0.358 [9.09]        |
| RNX038       | 0.420 ± 0.020 [10.67 ± 0.51]       | 0.470 [11.94]       |
| RNX050       | 0.540 ± 0.020 [13.72 ± 0.51]       | 0.595 [15.11]       |
| RNX075       | 0.790 ± 0.020 [20.07 ± 0.51]       | 0.845 [21.46]       |
| RNX100       | 1.040 ± 0.020 [26.42 ± 0.51]       | 1.100 [27.81]       |
| RNX125       | 1.290 ± 0.020 [32.77 ± 0.51]       | 1.350 [34.16]       |
| RNX150       | 1.540 ± 0.020 [39.12 ± 0.51]       | 1.600 [40.51]       |
| RNX200       | 2.040 ± 0.020 [51.82 ± 0.51]       | 2.100 [53.34]       |

**Note:**  
(1) Available with 0.032" [0.813 mm] leads ± 0.002" [0.051 mm].

| TECHNICAL SPECIFICATIONS   |      |                    |        |        |        |        |        |        |        |
|----------------------------|------|--------------------|--------|--------|--------|--------|--------|--------|--------|
| PARAMETER                  | UNIT | RNX025             | RNX038 | RNX050 | RNX075 | RNX100 | RNX125 | RNX150 | RNX200 |
| Insulation Resistance      | Ω    | ≥ 10 <sup>11</sup> |        |        |        |        |        |        |        |
| Category Temperature Range | °C   | - 55/+ 155         |        |        |        |        |        |        |        |



| MATERIAL SPECIFICATIONS |  |
|-------------------------|--|
| <b>Element:</b>         | High temperature fired cermet film   |
| <b>Core:</b>            | High purity 96 % alumina   |
| <b>Coating:</b>         | Epoxy on RNX025 and RNX038<br>Flameproof on RNX050 to RNX200               |
| <b>Termination:</b>     | Standard lead material is solder - coated copper. Solderable and weldable. |

| MECHANICAL SPECIFICATIONS |   |
|---------------------------|---|
| <b>Terminal Strength:</b> | 5 pound pull test   |
| <b>Solderability:</b>     | Continuous satisfactory coverage when tested in accordance with MIL-STD-202, Method 208 |



## Disclaimer

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