



# Metal Oxide Resistors, Special Purpose, High Voltage



### **FEATURES**

Low TCR: ± 200 ppm/°C standard; ± 100 ppm/°C; ± 50 ppm/°C available



Tolerance:  $\pm$  1 % standard to 1 G $\Omega$ ;  $\pm$  5 % above 1 G $\Omega$ ;  $\pm$  0.5 % available in  $\pm$  50 ppm/°C only. Special tolerance and/or temperature coefficient matching available.

COMPLIANT

- High voltage (up to 8 kV)
- For oil bath or open air operation
- Matched sets available
- Special testing available upon request
- Material categorization: For definitions of compliance please see <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

Lead (Pb)-containing terminations are not RoHS-compliant. Exemptions may apply.

STANDARD ELECTRICAL SPECIFICATIONS								
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING			MAXIMUM	RESISTANCE		TEMPERATURE
		P <sub>25 °C</sub> <sup>(1)</sup>	<i>P</i> <sub>70 °C</sub> <sup>(1)</sup> W	P <sub>125 °C</sub> <sup>(1)</sup>	WORKING VOLTAGE <sup>(2)</sup> V	RANGE (3) $\Omega$	TOLERANCE ± %	COEFFICIENT ± ppm/°C
						1M to 22M	0.5, 1, 2, 5, 10	50
RNX025	RNX-1/4	0.5	0.36	0.25	750	1K to 100M	1, 2, 5, 10	100, 200
						100 to 100K	1, 2, 5, 10	Non-inductive (4)
						1M to 50M	0.5, 1, 2, 5, 10	50
RNX038	RNX-3/8	1.0	0.72	0.5	1.5K	1K to 100M	1, 2, 5, 10	100
HINXUSO						1K to 1G	1, 2, 5, 10	200
						100 to 100K	1, 2, 5, 10	Non-inductive (4)
		1.2	0.86	0.6	2K	1M to 100M	0.5, 1, 2, 5, 10	50
DNIVOEO	DNIV 1/0					1K to 250M	1, 2, 5, 10	100
RNX050	RNX-1/2					1K to 2G	1, 2, 5, 10	200
						100 to 100K	1, 2, 5, 10	Non-inductive (4)
	RNX-3/4	2.0	1.44			1M to 100M	0.5, 1, 2, 5, 10	50
RNX075				1.0	3K	1K to 500M	1, 2, 5, 10	100
RINXU/5						1K to 2G	1, 2, 5, 10	200
						100 to 100K	1, 2, 5, 10	Non-inductive (4)
	RNX-1	2.5	1.8	1.25	4K	1M to 100M	0.5, 1, 2, 5, 10	50
RNX100						1K to 500M	1, 2, 5, 10	100
HINATUU						1K to 2G	1, 2, 5, 10	200
						100 to 1M	1, 2, 5, 10	Non-inductive (4)
	RNX-1-1/4	3.0	2.16	1.5	5K	1K to 500M	1, 2, 5, 10	100
RNX125						1K to 2G	1, 2, 5, 10	200
						100 to 1M	1, 2, 5, 10	Non-inductive (4)
RNX150	RNX-1-1/2	4.0	2.88	2.0	6K	1K to 500M	1, 2, 5, 10	100
						1K to 2G	1, 2, 5, 10	200
						100 to 1M	1, 2, 5, 10	Non-inductive (4)
	RNX-2	5.0	3.6	2.5	8K	1K to 500M	1, 2, 5, 10	100
RNX200						1K to 2G	1, 2, 5, 10	200
						100 to 1M	1, 2, 5, 10	Non-inductive (4)

All resistance values are calibrated at 100 V<sub>DC</sub>. 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)
Increase wattage by 25 % for 0.032 (0.813 mm) diameter leads
Continuous working voltage shall be  $\sqrt{P} \times R$  or maximum working voltage, whichever is less.

For resistance values above and below those listed please contact us

Non-inductive ± 200 ppm/°C TCR only

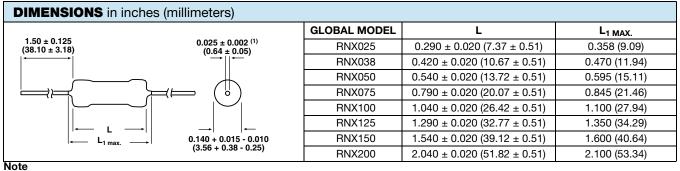


TECHNICAL SPECIFICATIONS									
PARAMETER	UNIT	RNX025	RNX038	RNX050	RNX075	RNX100	RNX125	RNX150	RNX200
Insulation Resistance	Ω	≥ 10 <sup>11</sup>							
Category Temperature Range	°C	Epoxy coated = - 55/+ 150; silicone coated = - 55/+ 225							

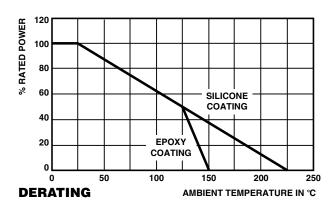
GLOBAL PART NUMBER INFORMATION						
New Global Part Numbering: RNX05010K0KKLB (preferred part numbering format)						
R N X 0 5 0 1 0 K 0 K K L B						
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	TEMP. COEFFICIENT	PACKAGING (1)	CONSTRUCTION	SPECIAL
(See Standard	$\mathbf{R} = \Omega$	$D = \pm 0.5 \%$	<b>H</b> = 50 ppm	EL = Lead (Pb)-free, lacer	Blank = Standard	Blank = Standard
Electrical	$\mathbf{K} = \mathbf{k}\Omega$	<b>F</b> = ± 1 %	<b>K</b> = 100 ppm	<b>EE</b> = Lead (Pb)-free, T/R	N = Non-inductive	(Dash number)
Specifications	$\mathbf{M} = \mathbf{M}\Omega$	<b>G</b> = ± 2 %	<b>N</b> = 200 ppm	(1/4, 3/8, 1/2, 3/4, 1 only)	<b>P</b> = 0.032" Ø leads	(Up to 3 digits)
table)	$G = G\Omega$	<b>J</b> = ± 5 %		LB = Tin/lead, lacer		From <b>1 to 999</b>
, ,	<b>910R</b> = 910 Ω	<b>K</b> = ± 10 %		RC = Tin/lead, T/R		as applicable
	<b>10M0</b> = 10 M $\Omega$			(1/4, 3/8, 1/2, 3/4, 1 only)		
$ \mathbf{1G00} = 1.0  \mathbf{G}\Omega $						
Historical Part Number example: RNX-1/210K0KK (will continue to be accepted)						
RNX-1/2		10K0	Ķ	K	L05	
HISTOR MODI		STRUCTION	RESISTANCE VALUE		TEMP. OEFFICIENT	PACKAGING

### **Notes**

- (1) Some packaging codes are model specific
- For additional information on packaging, refer to the Through-Hole Resistor Packaging document (www.vishay.com/doc?31544).



(1) Available with 0.032" (0.813 mm) leads ± 0.002" (0.051 mm)



MATERIAL SPECIFICATIONS				
Element High temperature fired cermet film				
Core	High purity 96 % alumina			
Coating	Flame-retardant epoxy on RNX025 and RNX038, flameproof silicone on RNX050 to RNX200			
Termination	Standard lead material is solder-coated copper. Solderable and weldable.			

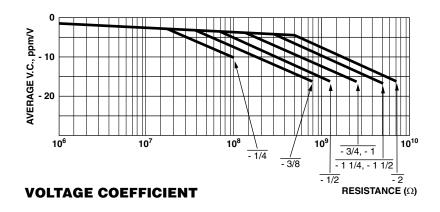
MECHANICAL SPECIFICATIONS				
Terminal Strength	5 pound pull test			
Solderability	Continuous satisfactory coverage when tested in accordance with MIL-STD-202, method 208			





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