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Vishay Dale

TEMPERATURE

Document Number: 31032

RNX

## Metal Oxide Resistors, Special Purpose, High Voltage

### **FEATURES**

- 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.
- High voltage (up to 8 kV)

RESISTANCE

- For oil bath or open air operation
- Matched sets available
- Special testing available upon request
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

MAXIMUM

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

GLOBAL MODEL	HISTORICAL MODEL	P <sub>25 °C</sub> <sup>(1)</sup> W	P <sub>70 °C</sub> <sup>(1)</sup> W	P <sub>125 °C</sub> <sup>(1)</sup> W	WORKING VOLTAGE <sup>(2)</sup> V	RANGE $(3)$ $\Omega$	TOLERANCE ± %	COEFFICIENT ± ppm/°C
	RNX-1/4	0.5	0.36	0.25	750	1M to 22M	0.5, 1, 2, 5, 10	50
RNX025						1K to 100M	1, 2, 5, 10	100, 200
						100 to 100K	1, 2, 5, 10	Non-inductive <sup>(4)</sup>
	RNX-3/8	1.0	0.72	0.5	1.5K	1M to 50M	0.5, 1, 2, 5, 10	50
RNX038						1K to 100M	1, 2, 5, 10	100
<b>HINAU30</b>						1K to 1G	1, 2, 5, 10	200
						100 to 100K	1, 2, 5, 10	Non-inductive <sup>(4)</sup>
	RNX-1/2	1.2	0.86	0.6	2К	1M to 100M	0.5, 1, 2, 5, 10	50
						1K to 250M	1, 2, 5, 10	100
RNX050						1K to 2G	1, 2, 5, 10	200
						100 to 100K	1, 2, 5, 10	Non-inductive <sup>(4)</sup>
RNX075	RNX-3/4	2.0	1.44	1.0	ЗК	1M to 100M	0.5, 1, 2, 5, 10	50
						1K to 500M	1, 2, 5, 10	100
						1K to 2G	1, 2, 5, 10	200
						100 to 100K	1, 2, 5, 10	Non-inductive <sup>(4)</sup>
RNX100	RNX-1	2.5	1.8	1.25	4К	1M to 100M	0.5, 1, 2, 5, 10	50
						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 <sup>(4)</sup>
	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 <sup>(4)</sup>
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 <sup>(4)</sup>
	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 <sup>(4)</sup>
Notes								

#### Notes

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.

(1)

(2)

(3) For resistance values above and below those listed please contact us

(4) Non-inductive ± 200 ppm/°C TCR only

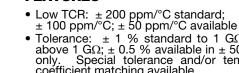




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STANDARD ELECTRICAL SPECIFICATIONS

**POWER RATING** 



Note

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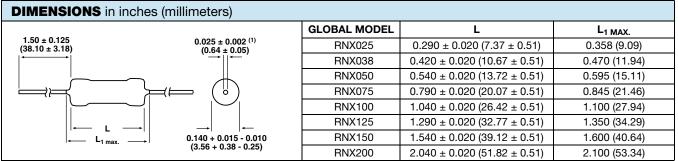
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TECHNICAL SPECIFICATIONS												
PARAMETER		UNIT	RNX025	RNX038	RNX050	RNX075	R	NX100	RNX12	25 F	RNX150	RNX200
Insulation Resistance		Ω	≥ 10 <sup>11</sup>									
Category Temperature Range		°C	Epoxy coated = - 55/+ 150; silicone coated = - 55/+ 225									
	PART NUMB	X05010K	-	-	numbering fo	ormat)		В				
GLOBAL		TOLERAN						 				CIAL
MODEL (See Standard Electrical Specifications table)	$\mathbf{R} = \Omega$ $\mathbf{K} = \mathbf{k}\Omega$ $\mathbf{M} = \mathbf{M}\Omega$ $\mathbf{G} = \mathbf{G}\Omega$	5 % H = % K =	FICIENT 50 ppm 100 ppm 200 ppm	EL = Lead (Pb)-free, lacer EE = Lead (Pb)-free, T/R (1/4, 3/8, 1/2, 3/4, 1 only) LB = Tin/lead, lacer			Blank = Standard $N = Non-inductiveP = 0.032" Ø leadsBlank = Standard(Dash number(Up to 3 digitFrom 1 to 99)$			Standard number) 3 digits)		
	<b>910R</b> = 910 Ω <b>10M0</b> = 10 ΜΩ <b>1G00</b> = 1.0 GΩ	$\mathbf{K} = \pm 10$			<b>RC</b> = T	n/lead, T/R /2, 3/4, 1 on					as app	olicable
Historical Part	Number example	e: RNX-1/2	10K0KK (w	vill continue	to be accept	ed)						
RNX-1/2				10K0		К		К			L05	
HISTORICAL MODEL CONS		TRUCTIO		SISTANCE VALUE		RANCE DDE	C	TEMP. COEFFICIENT		PACKAGING		IG

Notes

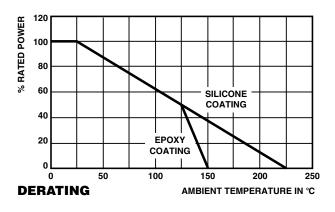
<sup>(1)</sup> Some packaging codes are model specific

For additional information on packaging, refer to the Through-Hole Resistor Packaging document (<u>www.vishay.com/doc?31544</u>).



Note

<sup>(1)</sup> Available with 0.032" (0.813 mm) leads ± 0.002" (0.051 mm)



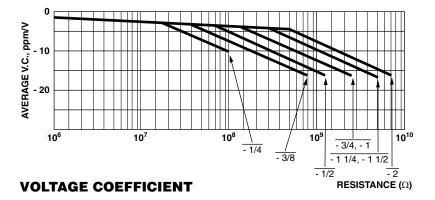
MATERIAL SPECIFICATIONS						
Element	High temperature fired cermet film					
Core	High purity 96 % alumina					
Coating	Flame-retardant epoxy on RNX025 and RNX038, flameproof silicone on RNX050 to RNX200					
Termination	Standard lead material is solder-coated copper. Solderable and weldable.					

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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