

Metal Oxide Resistors, Special Purpose, High Voltage



FEATURES

- Low TCR: ± 200 ppm/ $^{\circ}\text{C}$ standard; ± 100 ppm/ $^{\circ}\text{C}$; ± 50 ppm/ $^{\circ}\text{C}$ available
- Tolerance: $\pm 1\%$ standard to 1 G Ω ; $\pm 5\%$ above 1 G Ω ; $\pm 0.5\%$ available in ± 50 ppm/ $^{\circ}\text{C}$ only. Special tolerance and/or temperature coefficient matching available.
- 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 www.vishay.com/doc?99912


RoHS*
COMPLIANT

Note

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

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING			MAXIMUM WORKING VOLTAGE ⁽²⁾ V	RESISTANCE RANGE ⁽³⁾ Ω	TOLERANCE $\pm \%$	TEMPERATURE COEFFICIENT $\pm$ ppm/ $^{\circ}\text{C}$
		$P_{25^{\circ}\text{C}}$ ⁽¹⁾ W	$P_{70^{\circ}\text{C}}$ ⁽¹⁾ W	$P_{125^{\circ}\text{C}}$ ⁽¹⁾ W				
RNX025	RNX-1/4	0.5	0.36	0.25	750	1M to 22M	0.5, 1, 2, 5, 10	50
						1K to 100M	1, 2, 5, 10	100, 200
						100 to 100K	1, 2, 5, 10	Non-inductive ⁽⁴⁾
RNX038	RNX-3/8	1.0	0.72	0.5	1.5K	1M to 50M	0.5, 1, 2, 5, 10	50
						1K to 100M	1, 2, 5, 10	100
						1K to 1G	1, 2, 5, 10	200
RNX050	RNX-1/2	1.2	0.86	0.6	2K	100 to 100K	1, 2, 5, 10	Non-inductive ⁽⁴⁾
						1M to 100M	0.5, 1, 2, 5, 10	50
						1K to 250M	1, 2, 5, 10	100
RNX075	RNX-3/4	2.0	1.44	1.0	3K	1K to 2G	1, 2, 5, 10	200
						100 to 100K	1, 2, 5, 10	Non-inductive ⁽⁴⁾
						1M to 100M	0.5, 1, 2, 5, 10	50
RNX100	RNX-1	2.5	1.8	1.25	4K	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⁾
RNX125	RNX-1-1/4	3.0	2.16	1.5	5K	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⁾
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⁾
RNX200	RNX-2	5.0	3.6	2.5	8K	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⁾

Notes

- All resistance values are calibrated at 100 V_{DC}. 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)
- (1) Increase wattage by 25 % for 0.032" (0.813 mm) diameter leads
 (2) Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.
 (3) For resistance values above and below those listed please contact us
 (4) Non-inductive ± 200 ppm/ $^{\circ}\text{C}$ TCR only

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RNX025	RNX038	RNX050	RNX075	RNX100	RNX125	RNX150	RNX200
Insulation Resistance	Ω	$\geq 10^{11}$							
Category Temperature Range	$^{\circ}\text{C}$	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 Electrical Specifications table)	R = Ω K = kΩ M = MΩ G = GΩ 910R = 910 Ω 10M0 = 10 MΩ 1G00 = 1.0 GΩ				D = ± 0.5 % F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 %		H = 50 ppm K = 100 ppm N = 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 RC = Tin/lead, T/R (1/4, 3/8, 1/2, 3/4, 1 only)				Blank = Standard N = Non-inductive P = 0.032" Ø leads		Blank = Standard (Dash number) (Up to 3 digits) From 1 to 999 as applicable	

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

RNX-1/2		10K0	K	K	L05
HISTORICAL MODEL	CONSTRUCTION	RESISTANCE VALUE	TOLERANCE CODE	TEMP. COEFFICIENT	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).

DIMENSIONS in inches (millimeters)

	GLOBAL MODEL	L	L ₁ MAX.
	RNX025	0.290 $\pm$ 0.020 (7.37 $\pm$ 0.51)	0.358 (9.09)
	RNX038	0.420 $\pm$ 0.020 (10.67 $\pm$ 0.51)	0.470 (11.94)
	RNX050	0.540 $\pm$ 0.020 (13.72 $\pm$ 0.51)	0.595 (15.11)
	RNX075	0.790 $\pm$ 0.020 (20.07 $\pm$ 0.51)	0.845 (21.46)
	RNX100	1.040 $\pm$ 0.020 (26.42 $\pm$ 0.51)	1.100 (27.94)
	RNX125	1.290 $\pm$ 0.020 (32.77 $\pm$ 0.51)	1.350 (34.29)
	RNX150	1.540 $\pm$ 0.020 (39.12 $\pm$ 0.51)	1.600 (40.64)
	RNX200	2.040 $\pm$ 0.020 (51.82 $\pm$ 0.51)	2.100 (53.34)

Note

- (1) Available with 0.032" (0.813 mm) leads $\pm$ 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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RNX02545M0FKLB	RNX038750RFNLBN	RNX03810M0FNLB	RNX038100MFKRB	RNX0502M00FKLB
RNX038200MJKR6	RNX025100MFKRE	RNX038200MFKLB	RNX05010M0FHLB	RNX07568K1FNLB
RNX03810K0KNLB	RNX03815K0KNLB	RNX0381K00KNLB	RNX10055M0JKLB	RNX02510M0FKLB
RNX02520M0FKLB	RNX02530M0FKLB	RNX3/8 220M 1%M	RNX2002M20FKLB	RNX02513M0FKLB
RNX02515M0FKLB	RNX0251M00FKLB	RNX0383M30FNLB	RNX050150KFKLB	RNX0755M00JKLB
RNX02540M2FNLB	RNX038470MFNEB	RNX07547K5JNLB	RNX1253K90FNELN	RNX038200RFNLBN
RNX038499RFNLBN	RNX050100MFHRE	RNX0381G00FNLB	RNX0381M00DHLB	RNX050100MDHLB
RNX038150RFNLBN	RNX0755M60JKEL	RNX0502G00JNLB	RNX0501K00DKLB	RNX0252M00FNLB
RNX02536M0JNLB	RNX02547M0JNLB	RNX02550M0FKLB	RNX02560M0FKLB	RNX02578M7FKLB
RNX02590M0FKLB	RNX038100MFNLB	RNX03810M0FKLB	RNX03811M1FKLB	RNX038150MFNLB
RNX03815M0FKLB	RNX038187MFNLB	RNX0381M00FKLB	RNX0381M50FKLB	RNX038200KFKLB
RNX03825M0FHLB	RNX0382M00FKLB	RNX0382M20FKLB	RNX038300MFNLB	RNX03830M0JNLB
RNX0384M02FKLB	RNX038787MFNLB	RNX0387M50JKLB	RNX050100KFKLB	RNX050100MFKLB
RNX05010K0FKLB	RNX05010M0FKLB	RNX0501G00JNLB	RNX0501M00FKLB	RNX050200MFKLB
RNX05045M0FKLB	RNX05047M5FKLB	RNX05090M0FKLB	RNX075100MFKLB	RNX075111MFKLB
RNX0751G11FNLB	RNX075200MFKLB	RNX0753M30JNLB	RNX075500MFKLB	RNX15068M0JNLB
RNX07550M0FKLB	RNX0382M50FHEL	RNX0381G00FNRE	RNX0382M00FNRE	RNX12550M0FKRE
RNX025100MFKEL	RNX025100MJNEL	RNX0251M00FKEL	RNX038100MFKEL	RNX03810M0FKEL
RNX03815M0FKEL	RNX0381M00FKEL	RNX0382M20FKEL	RNX0254M75FKLB	RNX1/4 6.98M 1%K
RNX0381G00GNEL	RNX0381M30JKLB	RNX025100MJNWF	RNX02511M0FKLB	RNX02512M1FKLB