

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
- Tolerances: $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$
- High Voltage (up to 45 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 V _≡	RESISTANCE RANGE Ω ⁽²⁾			
		P _{25 °C} W ⁽¹⁾	P _{70 °C} W ⁽¹⁾	P _{125 °C} W ⁽¹⁾		200 ppm	100 ppm	50 ppm	NON-INDUCTIVE ⁽³⁾
ROX050	ROX-1/2	2.0	1.4	1.0	2 kV	1K - 1G	1K - 100M	1M - 100M	-
ROX075	ROX-3/4	3.0	2.16	1.5	5 kV	1K - 3G	1K - 500M	1M - 100M	100R - 1M
ROX100	ROX-1	4.0	2.88	2.0	7.5 kV	1K - 3G	1K - 500M	1M - 100M	100R - 1M
ROX150	ROX-1-1/2	5.0	3.6	2.5	11 kV	1K - 3G	1K - 500M	1M - 100M	100R - 1M
ROX200	ROX-2	6.0	4.32	3.0	15 kV	1K - 3G	1K - 1G	1M - 500M	100R - 1M
ROX300	ROX-3	10.0	7.2	5.0	22.5 kV	1K - 3G	1K - 1G	1M - 500M	400R - 10M
ROX400	ROX-4	12.0	8.64	6.0	30 kV	1K - 3G	1K - 1G	1M - 500M	500R - 10M
ROX500	ROX-5	16.0	11.52	8.0	37.5 kV	1K - 3G	1K - 1G	1M - 500M	500R - 10M
ROX600	ROX-6	20.0	14.4	10.0	45 kV	1K - 3G	1K - 1G	1M - 500M	500R - 10M

Note:

⁽¹⁾ Increase wattage by 40 % for 0.040" [1.02 mm] diameter leads

⁽²⁾ For resistance values above and below those listed please contact us

⁽³⁾ Non inductive ± 200 ppm/ $^{\circ}\text{C}$ TCR only

- All resistance values are calibrated at 100 VDC. Calibration at other voltages available
- $\pm 1\%$ not available above 1 G Ω
- Part Marking: print marked - DALE, model, value, tolerance, temperature coefficient, date code

TECHNICAL SPECIFICATIONS										
PARAMETER	UNIT	ROX050	ROX075	ROX100	ROX150	ROX200	ROX300	ROX400	ROX500	ROX600
Insulation Resistance	Ω	$\geq 10^{11}$								
Category Temperature Range	$^{\circ}\text{C}$	- 55/+ 155								

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: ROX300100MGNF5 (preferred part numbering format)

R	O	X	3	0	0	1	0	0	M	G	N	F	5					
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GLOBAL MODEL (see Electrical Specifications table)	RESISTANCE VALUE R = Decimal K = Thousand M = Million G = Billion 910R = 910 Ω 10M0 = 10 M Ω 1G00 = 1.0 G Ω	TOLERANCE CODE F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$	TEMP COEFFICIENT H = 50 ppm K = 100 ppm N = 200 ppm	PACKAGING ⁽⁴⁾ EL = Lead (Pb)-free, Lacer EE = Lead (Pb)-free, T/R (1000 pieces) EM = Lead (Pb)-free, Foam LB = Tin/Lead, Lacer RF = Tin/Lead, T/R (1000 pieces) F5 = Tin/Lead, Foam	CONSTRUCTION (up to 2 digits) Blank = Standard N = Non-inductive P = 0.040 \varnothing leads S = Solid Body, Axial T = Threaded Terminals Y = One end Axial, one Threaded Terminal	SPECIAL Blank = Standard (Dash Number) (up to 3 digits) From 1 - 999 as applicable
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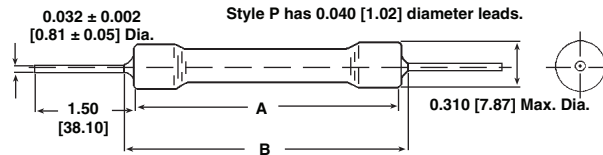
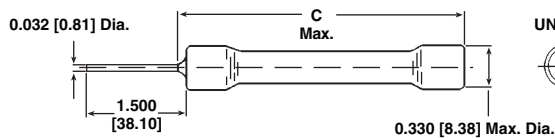
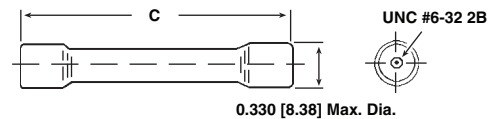
Historical Part Number example: ROX-3100MGN (will continue to be accepted)

ROX-3		100M	G	N	F05
HISTORICAL MODEL	CONSTRUCTION	RESISTANCE VALUE	TOLERANCE CODE	TEMP. COEFFICIENT	PACKAGING

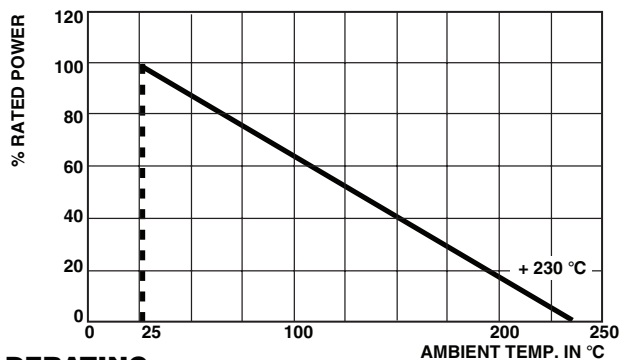
Note:

⁽⁴⁾ Some packaging codes are model specific.

* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS
Styles N, P and S

Style Y

Style T


DIMENSIONS in inches [millimeters]				
GLOBAL MODEL	STYLE N, P, S		STYLE T	STYLE Y
	A	B	C	C MAX.
ROX050	0.550 ± 0.032 [13.97 ± 0.81]	0.700 [17.78]	N/A	N/A
ROX075	0.800 ± 0.032 [20.32 ± 0.81]	0.900 [22.86]	1.168 ± 0.022 [29.72 ± 0.56]	1.050 [26.67]
ROX100	0.920 ± 0.032 [23.37 ± 0.81]	1.020 [25.91]	1.288 ± 0.022 [32.77 ± 0.56]	1.170 [29.72]
ROX150	1.550 ± 0.032 [39.37 ± 0.81]	1.650 [41.91]	1.918 ± 0.022 [48.77 ± 0.56]	1.800 [45.72]
ROX200	2.050 ± 0.032 [52.07 ± 0.81]	2.150 [54.61]	2.418 ± 0.022 [61.47 ± 0.56]	2.300 [58.42]
ROX300	3.050 ± 0.032 [77.47 ± 0.81]	3.150 [80.01]	3.418 ± 0.022 [86.87 ± 0.56]	3.300 [83.82]
ROX400	4.050 ± 0.032 [102.87 ± 0.81]	4.150 [105.41]	4.418 ± 0.022 [112.27 ± 0.56]	4.300 [109.22]
ROX500	5.050 ± 0.032 [128.27 ± 0.81]	5.150 [130.81]	5.418 ± 0.022 [137.67 ± 0.56]	5.300 [134.62]
ROX600	6.050 ± 0.032 [153.67 ± 0.81]	6.150 [156.21]	6.418 ± 0.022 [163.07 ± 0.56]	6.300 [160.02]


DERATING
MECHANICAL SPECIFICATIONS
Terminal Strength:

10 pound pull test

Solderability:

Continuous satisfactory coverage when tested in accordance with MIL-STD-202, Method 208

MATERIAL SPECIFICATIONS

Element	High temperature fired cermet film
Core	High purity 96 % alumina, tubular or solid
Coating	Blue flameproof on ROX050 thru ROX200. Black silicone on ROX300 thru ROX600
Termination	Standard lead material is solder - coated copper; solderable and weldable. 0.032" [0.813 mm] Style P 0.040" [1.02 mm] available



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