

Metal Oxide Resistors, Special Purpose, High Voltage



FEATURES

- Low TC: $\pm 200\text{ppm}/^\circ\text{C}$ standard. $\pm 100\text{ppm}/^\circ\text{C}$, $\pm 50\text{ppm}/^\circ\text{C}$ available.
- Tolerances: $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$
- 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_{\cong}	RESISTANCE RANGE Ω^{***}			
		$P_{25^\circ\text{C}}$ W**	$P_{70^\circ\text{C}}$ W**	$P_{125^\circ\text{C}}$ W**		200ppm	100ppm	50ppm	NON-INDUCTIVE ****
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	7.5KV	1K – 3G	1K – 500M	1M – 100M	100R – 1M
ROX150	ROX-1-1/2	5.0	3.6	2.5	11KV	1K – 3G	1K – 500M	1M – 100M	100R – 1M
ROX200	ROX-2	6.0	4.32	3.0	15KV	1K – 3G	1K – 1G	1M – 500M	100R – 1M
ROX300	ROX-3	10.0	7.2	5.0	22.5KV	1K – 3G	1K – 1G	1M – 500M	400R – 10M
ROX400	ROX-4	12.0	8.64	6.0	30KV	1K – 3G	1K – 1G	1M – 500M	500R – 10M
ROX500	ROX-5	16.0	11.52	8.0	37.5KV	1K – 3G	1K – 1G	1M – 500M	500R – 10M
ROX600	ROX-6	20.0	14.4	10.0	45KV	1K – 3G	1K – 1G	1M – 500M	500R – 10M

**Increase wattage by 40% for 0.040" [1.02mm] diameter leads.

*** For resistance values above and below those listed please contact us.

**** Non inductive $\pm 200\text{ppm}/^\circ\text{C}$ TC only.

NOTE:

- All resistance values are calibrated at 100 VDC. Calibration at other voltages available
- $\pm 1\%$ not available above 1G ohm.
- 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	TOLERANCE CODE	TEMP. COEFFICIENT	PACKAGING**	CONSTRUCTION	SPECIAL
	R = Decimal K = Thousand M = Million G = Billion 910R = 910 Ω 10M0 = 10M Ω 1G00 = 1.0G Ω	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$	H = 50ppm K = 100ppm N = 200ppm	EL = Lead Free, Lacer EE = Lead Free, T/R (1000pcs) EM = Lead Free, Foam LB = Tin/Lead, Lacer RF = Tin/Lead, T/R (1000pcs) F5 = Tin/Lead, Foam	(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	Blank = Standard (Dash Number) (up to 3 digits) From 1-999 as applicable

Historical Part Number example: ROX-3100MGN (will continue to be accepted)

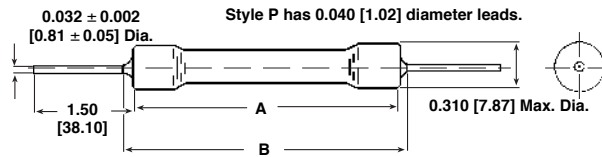
ROX-3		100M	G	N	F05
HISTORICAL MODEL	CONSTRUCTION	RESISTANCE VALUE	TOLERANCE CODE	TEMP. COEFFICIENT	PACKAGING

** NOTE: Some packaging codes are model specific.

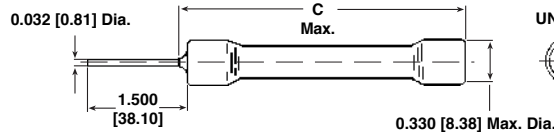
* Pb containing terminations are not RoHs compliant, exemptions may apply

DIMENSIONS

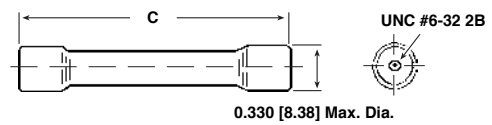
Styles N, P and S



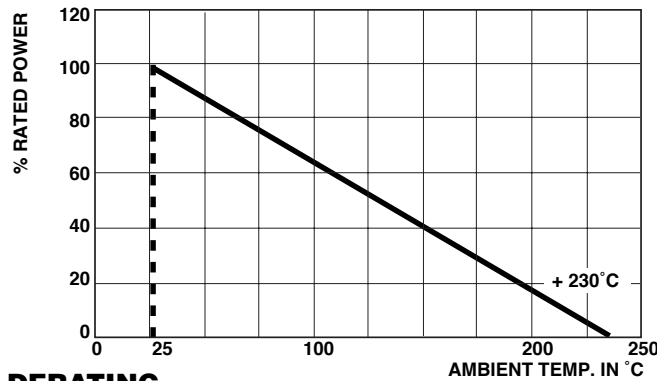
Style Y



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" [0.813mm] Style P 0.040" [1.02mm] available.