Metal Oxide Resistors, Special Purpose, High Voltage

FEATURES

- Low TCR: ± 200 ppm/°C standard; ± 100 ppm/°C, ± 50 ppm/°C available
- Tolerances: ± 1 %, ± 2 %, ± 5 %, ± 10 %
- High Voltage (up to 45 kV)
- For oil bath or open air operation
- Matched sets available
- Special testing available upon request
- Compliant to RoHS directive 2002/95/EC

Pb Available

e3

RoHS* COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

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

Notes

(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/°C TCR only

- **All resistance values are calibrated at 100 V_{DC}. Calibration at other voltages available.**
- ± 1 % not available above 1 GΩ
- 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	≥ 10^{11}								
Category Temperature Range	°C	Epoxy coated = - 55/+ 180; Silicone coated = - 55/+ 230								

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						

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	TEMP. COEFFICIENT	PACKAGING (4)	CONSTRUCTION	SPECIAL
(See Electrical Specifications table)	**R** = Decimal **K** = Thousand **M** = Million **G** = Billion **910R** = 910 Ω **10M0** = 10 MΩ **1G00** = 1.0 GΩ	**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 (1000 pieces) **EM** = Lead (Pb)-free, Foam **LB** = Tin/Lead, Lacer **RF** = Tin/Lead, T/R (1000 pieces) **F5** = Tin/Lead, Foam	(Up to 2 digits) Blank = Standard **N** = Non-inductive **P** = 0.040 Ø 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 to 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

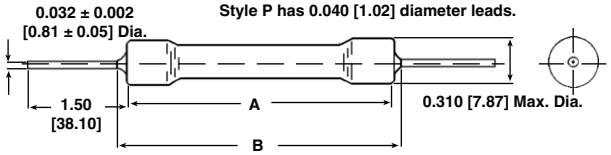
Notes

(4) Some packaging codes are model specific.

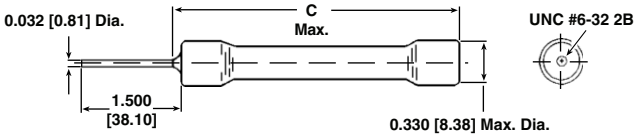
* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS

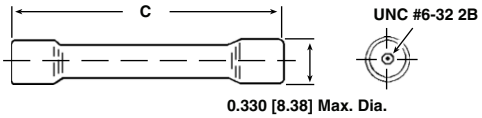
Styles N, P and S



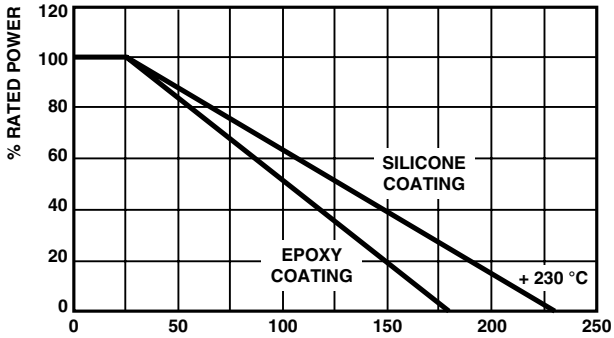
Style Y



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]



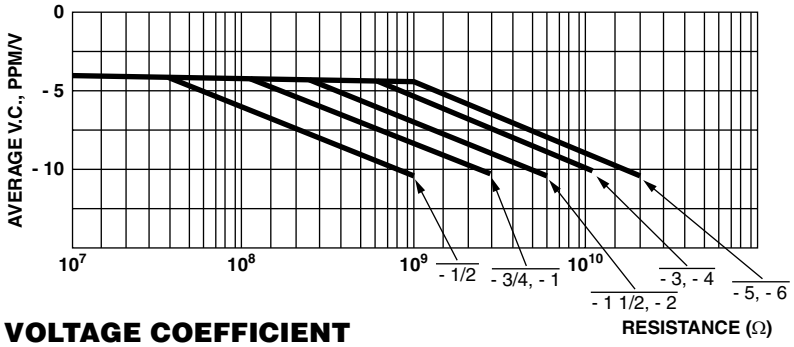
DERATING

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 flame-retardant epoxy on ROX050 thru ROX200. Black flameproof 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



VOLTAGE COEFFICIENT

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