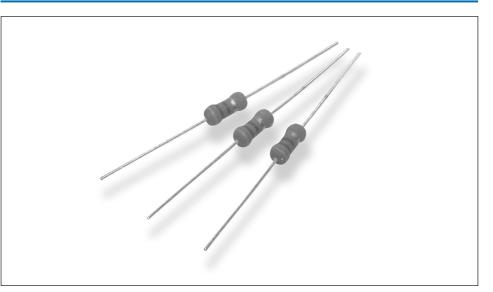


## **Type ROX Series**

#### **Key Features**

- High Power with Small Size for Space Saving
- Excellent Long Term Stability
- Complete Flameproof Construction
- High Surge/Overload Capability
- Controlled Temperature Capability
- Solvent Resistant Coat and Code
- Special Lead Formations Possible



The resistive element comprises a metal oxide film deposited on a ceramic former. The element is protected by a flameproof coating which will withstand overload conditions without flame or mechanical damage. They are recommended for use in applications such as line protection etc...

#### **Characteristics - Electrical**

|   | ROXO5  | ROX1 | ROX2 | ROX05S | ROX1SS    | ROX1S | ROX2S | ROX3S | ROX5S |
|---|--|------|------|--------|-----------|-------|-------|-------|-------|
| Rated Power @ 70°C (W):                   | 0.5  | 1    | 2    | 0.5    | 1         | 1     | 2     | 3     | 5     |
| Resistance Range (ohms) Min:              | 0.1  | 0.1  | 0.1  | 0.1    | 0.1       | 0.1   | 0.1   | 0.1   | 0.1   |
| Max:                                      | 330K   | 470K | 560K | 100K   | 200R      | 270K  | 470K  | 560K  | 560K  |
| Tolerance and Code Letter:                | and Code Letter: 2% (G) / 5% (J) 1% (F) available on request |      |      |        |           |       |       |       |       |
| Temp. Coefficient Max (ppm/°C):           |  |      |      |        | ± 350     |       |       |       |       |
| Selection Series:                         |  |      |      |        | E24       |       |       |       |       |
| Limiting Element Voltage (V):             | 250  | 350  | 350  | 250    | 350       | 350   | 350   | 350   | 500   |
| Maximum Overload Voltage (V):             | 400  | 600  | 600  | 400    | 400       | 600   | 600   | 600   | 800   |
| Max Intermittent Overload<br>Voltage (V): | 500  | 750  | 750  | 500    | 500       | 750   | 750   | 750   | 1500  |
| Operating Temp. Range (°C):               |  |      |      | -:     | 55 to +15 | 5     |       |       |       |
| Climatic Category:                        |  |      |      | :      | 55/155/42 |       |       |       |       |
| Dielectric Strength (V):                  | 250  | 350  | 350  | 250    | 350       | 350   | 350   | 350   | 500   |
| Insulation Resistance (Mohms):            |  |      |      |        | 1,000     |       |       |       |       |

#### Mounting

The resistors are suitable for processing on automatic insertion equipment and cutting and bending machines.

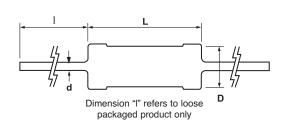
#### Marking

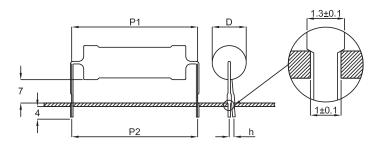
The resistors are marked with a four-band colour code in accordance with IEC 62. Grey base colour for Standard Range, Sea Blue colour for "S" Range.



## **Type ROX Series**

#### Dimensions





#### **Standard Range Leaded**

| Style | D max | L Max | I+/-3 | d+/-0.05 |
|-------|-------|-------|-------|----------|
| ROX05 | 3.5   | 10    | 28    | 0.54     |
| ROX1  | 5     | 12    | 25    | 0.7      |
| ROX2  | 5.5   | 16    | 28    | 0.7      |

#### "S" Range Leaded

| Style  | D max | L Max | I+/-3 | d+/-0.05 |
|--------|-------|-------|-------|----------|
| ROX05S | 2.5   | 7.5   | 28    | 0.54     |
| ROX1SS | 2.5   | 7.5   | 28    | 0.54     |
| ROX1S  | 3.5   | 10    | 28    | 0.7      |
| ROX2S  | 5     | 12    | 25    | 0.7      |
| ROX3S  | 5.5   | 16    | 28    | 0.7      |
| ROX5S  | 8     | 25    | 38    | 0.75     |

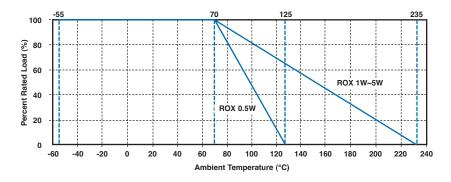
#### **Standard Range Pre-formed**

| Style | P1 ±0.5 | P2 ±2 | H1       | H2     | h max |
|-------|---------|-------|----------|--------|-------|
| ROXO5 | 12.5    | 12.5  | 7.5 ±1.5 | 3.5 ±1 | 2.0   |
| ROX1  | 15      | 15    | 7.5 ±1.5 | 3.5 ±1 | 2.0   |
| ROX2  | 20      | 20    | 7.5 ±2.0 | 3.5 ±1 | 3.0   |

#### "S" Range Pre-formed

| Style  | P1 ±0.5 | P2 ±2 | H1       | H2     | h max |
|--------|---------|-------|----------|--------|-------|
| ROXO5S | 10      | 10    | 7.5 ±1.5 | 3.5 ±1 | 2.0   |
| ROX1SS | 10      | 10    | 7.5 ±1.5 | 3.5 ±1 | 2.0   |
| ROX1S  | 12.5    | 12.5  | 7.5 ±0.5 | 3.5 ±1 | 2.0   |
| ROX2S  | 15      | 15    | 7.5 ±1.5 | 3.5 ±1 | 2.9   |
| ROX3S  | 20      | 20    | 7.5 ±2.0 | 3.5 ±1 | 3.0   |
| ROX5S  | 30      | 30    | 7.5 ±2.0 | 3.5 ±1 | 3.0   |
|        |         |       |          |        |       |

#### **Power Derating Curve**

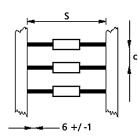


Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.



## **Type ROX Series**

#### Packaging



| New Style<br>Reference | Quantity per<br>Ammo Pack | Std tape<br>Spacing *S ±1 | Component<br>Spacing c ±0.5 |
|------------------------|---------------------------|---------------------------|-----------------------------|
| ROX05                  | 2,000                     | 52                        | 5                           |
| ROX1                   | 1,000                     | 52                        | 5                           |
| ROX2                   | 1,000                     | 63                        | 10                          |
| ROX05S                 | 2,000                     | 52                        | 5                           |
| ROX1SS                 | 2,000                     | 52                        | 5                           |
| ROX1S                  | 2,000                     | 52                        | 5                           |
| ROX2S                  | 1,000                     | 52                        | 5                           |
| ROX3S                  | 1,000                     | 63                        | 10                          |
| ROX5S                  | 500                       | 63                        | 10                          |

\* Other tape spacings available on request

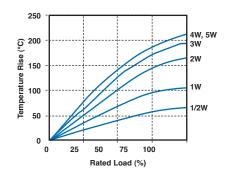
Other packaging styles are available on request

#### **Performance Characteristics**

# The evaluation of the performance characteristics is carried out with reference to IEC Specifications QC 400 000 and QC 400 100.

| TEST REF | Long Term Tests ± (5% + 0.1 ohm)   |
|----------|------------------------------------|
| 4.23     | Climatic sequence                  |
| 4.24     | Damp heat, steady state            |
| 4.25.1   | Endurance at 70°C                  |
| 4.25.3   | Endurance at 235°C                 |
| TEST REF | Short Term Tests ± (1% + 0.05 ohm) |
| 4.13     | Overload                           |
| 4.16     | Robustness of terminations         |
| 4.18     | Resistance to soldering heat       |
| 4.19     | Rapid change of temperature        |
| 4.22     | Vibration                          |
|          |                                    |

#### Heat Rise Chart



#### How to Order

| ROX   | 1                          | J  | 100R  | BL                      |
|---|----------------------------|--|---|-------------------------|
| <b>Common Part</b>                                      | Style                      | Tolerance  | Value   | Preform                 |
| ROX - Flame-Proof<br>Power Metal Oxide<br>Film Resistor | 1 - 1S<br>2 - 2S<br>3 - 3S | G - 2%<br>J - 5%<br>(F - 1% available<br>on request) | 100 ohm<br>(100 ohms) 100R<br>1K0<br>(1000 ohms) 1K0<br>100 K ohm<br>(100,000 ohms)<br>100K | BL - Preformed<br>Leads |

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