



## Fast Acting, Molded Styles, Custom Designed For Your Application



### FEATURES

- Low temperature coefficient (down to 30 ppm/°C)
- High temperature silicone molded package (derated to 200 °C)
- Performs function of resistor and series fuse and provides predictable fusing times
- Complete welded construction
- No flaming or distortion of unit under sufficient fusing conditions (contact factory for details)
- Ideal for squib circuit applications and protection of semi-conductor devices
- Negligible noise and voltage coefficient
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### TYPICAL ELECTRICAL SPECIFICATIONS

The following are offered as examples of reliable designs. Hundreds of possible combinations are available for meeting your requirements. Contact factory by using email address in the footer of this page, for assistance. Higher wattages available.

| GLOBAL MODEL | HISTORICAL MODEL | FUSING PARAMETERS |                        | RESISTANCE RANGE $\Omega$ | TOLERANCE $\pm$ % | 1.0 W CONTINUOUS POWER <sup>(1)</sup> |                          |
|--------------|------------------|-------------------|------------------------|---------------------------|-------------------|---------------------------------------|--------------------------|
|              |                  | FUSING CURRENT A  | TYPICAL FUSING TIME ms |                           |                   | CONTINUOUS CURRENT A                  | CROSSOVER VALUE $\Omega$ |
| RS01A...209  | RS-1A-209        | 0.5               | 4                      | 49 to 500                 | 5, 10             | 0.10                                  | 100.0                    |
| RS01A...118  | RS-1A-118        | 1.0               | 9                      | 6.8 to 185                | 5, 10             | 0.25                                  | 16.0                     |
| RS01A...212  | RS-1A-212        | 1.25              | 8                      | 4.7 to 107                | 5, 10             | 0.30                                  | 11.11                    |
| RS01A...213  | RS-1A-213        | 1.5               | 15                     | 3.5 to 68                 | 5, 10             | 0.35                                  | 8.16                     |
| RS01A...143  | RS-1A-143        | 2.0               | 15                     | 2.2 to 35                 | 5, 10             | 0.40                                  | 6.25                     |
| RS01A...214  | RS-1A-214        | 2.5               | 23                     | 1.7 to 23                 | 5, 10             | 0.45                                  | 4.94                     |
| RS01A...162  | RS-1A-162        | 3.0               | 48                     | 1.1 to 12                 | 5, 10             | 0.55                                  | 3.31                     |
| RS01A...208  | RS-1A-208        | 4.0               | 47                     | 0.72 to 6.44              | 5, 10             | 0.75                                  | 1.78                     |
| RS01A...207  | RS-1A-207        | 6.0               | 70                     | 0.35 to 2.17              | 5, 10             | 1.0                                   | 1.0                      |
| RS01A...215  | RS-1A-215        | 8.0               | 48                     | 0.29 to 1.61              | 5, 10             | 1.25                                  | 0.64                     |
| RS01A...173  | RS-1A-173        | 10.0              | 50                     | 0.23 to 1.16              | 5, 10             | 1.50                                  | 0.44                     |
| RS01A...216  | RS-1A-216        | 15.0              | 35                     | 0.19 to 0.82              | 5, 10             | 1.75                                  | 0.33                     |
| RS01A...217  | RS-1A-217        | 20.0              | 46                     | 0.12 to 0.42              | 5, 10             | 2.0                                   | 0.25                     |

#### Notes

- (1) The continuous current rating applies only to values equal to or less than the crossover value. The continuous power rating applies only to values equal to or higher than the crossover value.
- Be aware that the inherent compromise involved between resistive and fusing functions sometimes makes certain exact combinations unattainable. However, in nearly all cases, this does not prevent the production of a functional, reliable fuse resistor thoroughly capable of meeting application requirements.

### GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: RS01A402R0JS70209

R S 0 1 A 4 0 2 R 0 J S 7 0 2 0 9

| GLOBAL MODEL                                                            | VALUE                              | TOLERANCE                           | PACKAGING                                                                                                          | SPECIAL                                                             |
|-------------------------------------------------------------------------|------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| (see Typical Electrical Specifications Global Model column for options) | R = decimal<br>15R00 = 15 $\Omega$ | J = $\pm$ 5.0 %<br>K = $\pm$ 10.0 % | E70 = lead (Pb)-free, tape/reel<br>E12 = lead (Pb)-free, bulk<br>S70 = tin/lead, tape/reel<br>B12 = tin/lead, bulk | (dash number)<br>(up to 3 digits)<br>From 1 to 999<br>as applicable |

Historical Part Numbering example: RS-1A-209 402  $\Omega$  5 % S70

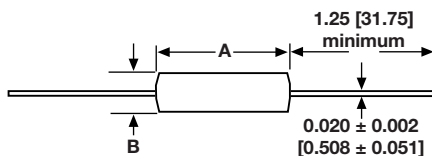
|                  |                  |                |           |
|------------------|------------------|----------------|-----------|
| RS-1A-209        | 402 $\Omega$     | 5 %            | S70       |
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |

If a MODEL listed in TYPICAL ELECTRICAL SPECIFICATIONS table does not meet your requirements, then please include the following information. It will enable us to choose the best design for your application.

1. Operating wattage or current, ambient temperature and required resistance stability. (%  $\Delta R$ /1000 h)
2. Fusing wattage or current and maximum "blow" time. Also, minimum "blow" time, if applicable.
3. Nominal resistance and maximum allowable resistance tolerance, (5 % to 10 % preferred).
4. Maximum allowable physical size.
5. Voltage to be interrupted.
6. Frequency of power source, wave form and a brief description of your application.



## DIMENSIONS in inches [millimeters]



| MODEL       | A                             | B                            |
|-------------|-------------------------------|------------------------------|
| RS01A...xxx | 0.422 ± 0.015 [10.72 ± 0.381] | 0.110 ± 0.015 [2.79 ± 0.381] |

## TECHNICAL SPECIFICATIONS

| PARAMETER               | UNIT            | TYPICAL WIREWOUND FUSE RESISTOR CHARACTERISTICS                                                                          |
|-------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------|
| Temperature Coefficient | ppm/°C          | ± 30 for 10 Ω and above; ± 50 for 1.0 Ω thru 9.9 Ω; ± 90 for 0.1 Ω thru 0.99 Ω                                           |
| Power Rating            | W               | 1.0 standard, higher power ratings available                                                                             |
| Dielectric Strength     | V <sub>AC</sub> | 500                                                                                                                      |
| Insulation Resistance   | MΩ              | 1000 minimum dry                                                                                                         |
| Fusing Times            | s               | 0.001 to 1.0                                                                                                             |
| Minimum Fusing Current  | A               | Approximately 4 times the continuous operating current obtainable on some designs. Larger ratios produce better designs. |
| Terminal Strength       | lb              | 5 minimum                                                                                                                |

## MATERIAL SPECIFICATIONS

**Element:** copper-nickel alloy or nickel-chrome alloy, depending on resistance value

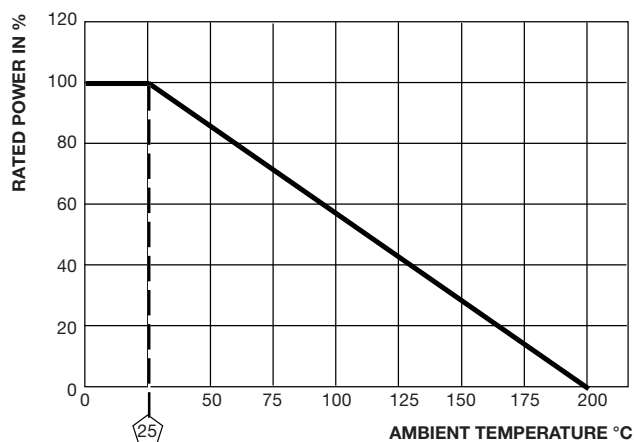
**Core:** alumina ceramic

**Encapsulant:** thermoset silicone mold compound

**End caps:** stainless steel

**Terminals:** tinned copperweld

**Part marking:** Dale, model, value, tolerance, date code



Derating



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