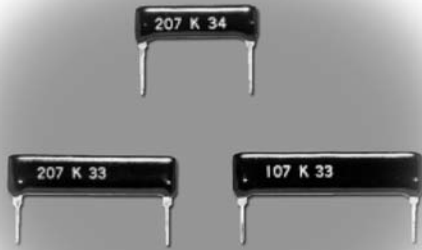


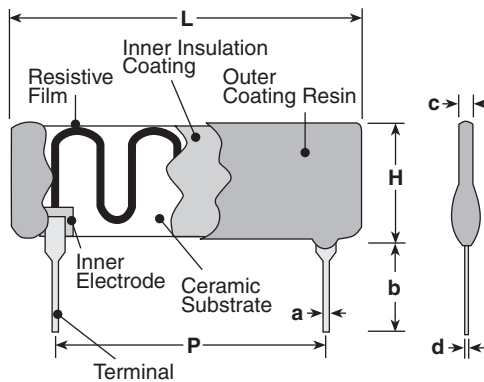
## thick film resistors for high voltage



## features

- High resistance resistors for high voltage circuits
- Thin SIP shape
- The flame retardant coats corresponding to UL94V-0 are used
- Thick film resistors ( $\text{RuO}_2$ ) ensure high stabilities in life and change in aging
- Marking: Black body color
- Products with lead-free terminations meet EU RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC

## dimensions and construction



|      | Dimensions inches ( <i>mm</i> ) |                |                        |                                                                                  |               |                         |                         |
|------|---------------------------------|----------------|------------------------|----------------------------------------------------------------------------------|---------------|-------------------------|-------------------------|
| Type | L (Max.)                        | H (Max.)       | a                      | b                                                                                | c (Max.)      | d                       | P                       |
| 9C   | 1.02<br>(26.0)                  | .256<br>(6.5)  | .020±.004<br>(0.5±0.1) | .118 <sup>±.020</sup> <sub>-.012</sub><br>(3.0 <sup>+0.5</sup> <sub>-0.3</sub> ) | .098<br>(2.5) | .010±.004<br>(0.25±0.1) | .902±.008<br>(22.9±0.2) |
| 8C   | .925<br>(23.5)                  |                |                        |                                                                                  |               |                         | .799±.008<br>(20.3±0.2) |
| 7C   | .823<br>(20.9)                  |                |                        |                                                                                  |               |                         | .701±.008<br>(17.8±0.2) |
| 5C   | .622<br>(15.8)                  |                |                        |                                                                                  |               |                         | .5±.008<br>(12.7±0.2)   |
| 3C   | .425<br>(10.8)                  |                |                        |                                                                                  |               |                         | .3±.008<br>(7.62±0.2)   |
| 5L   | .602<br>(15.3)                  | .200<br>(5.08) |                        |                                                                                  |               |                         | .5±.008<br>(12.7±0.2)   |
| 4L   | .500<br>(12.7)                  |                |                        |                                                                                  |               |                         | .402±.008<br>(10.2±0.2) |
| 6L   | .701<br>(17.8)                  |                |                        |                                                                                  |               |                         | .598±.008<br>(15.2±0.2) |

## ordering information

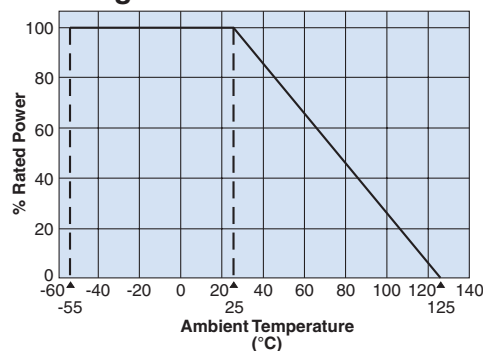
| New Part # | RK92 | 5L    | D                                                                                                              | 107                                                                                                    | J                                                |
|------------|------|-------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------|
|            | Type | Style | Termination<br>Surface Material                                                                                | Nominal<br>Resistance                                                                                  | Resistance<br>Tolerance                          |
|            |      | 9C    | D: SnAgCu<br>(Other termination material<br>styles may be available,<br>please contact factory<br>for options) | ±2% ~ ±10%:<br>2 significant figures<br>+ 1 multiplier<br>±1%: 3 significant figures<br>+ 1 multiplier | F: ±1%<br>G: ±2%<br>J: ±5%<br>K: ±10%<br>M: ±20% |
|            |      | 8C    |                                                                                                                |                                                                                                        |                                                  |
|            |      | 7C    |                                                                                                                |                                                                                                        |                                                  |
|            |      | 5C    |                                                                                                                |                                                                                                        |                                                  |
|            |      | 3C    |                                                                                                                |                                                                                                        |                                                  |
|            |      | 5L    |                                                                                                                |                                                                                                        |                                                  |
|            |      | 4L    |                                                                                                                |                                                                                                        |                                                  |
|            |      | 6L    |                                                                                                                |                                                                                                        |                                                  |

## applications and ratings

| Part Designation | Power Rating | T.C.R. (ppm/°C) Max. | Resistance Range (Ω) |           |         |         |         | Maximum Working Voltage | Rated Ambient Temperature | Operating Temperature Range |
|------------------|--------------|----------------------|----------------------|-----------|---------|---------|---------|-------------------------|---------------------------|-----------------------------|
|                  |              |                      | F: ±1%               | G: ±2%    | J: ±5%  | K: ±10% | M: ±20% |                         |                           |                             |
| 9C               | 1.1W         | ±300                 | 1M - 500M            | 1M - 500M | 1M - 1G | 1M - 1G | 1M - 1G | 10kV                    | +70°C                     | -25°C to +125°C             |
| 8C               | 1.0W         |                      | —                    | —         | 1M - 1G | 1M - 1G | 1M - 1G |                         |                           |                             |
| 7C               | 0.85W        |                      | —                    | —         | 1M - 1G | 1M - 1G | 1M - 1G |                         |                           |                             |
| 5C               | 0.75W        |                      | 1M - 500M            | 1M - 500M | 1M - 1G | 1M - 1G | 1M - 1G |                         |                           |                             |
| 3C               | 0.5W         |                      | 1M - 500M            | 1M - 500M | 1M - 1G | 1M - 1G | 1M - 1G | 7kV                     |                           |                             |
| 5L               | 0.5W         |                      | 1M - 500M            | 1M - 500M | 1M - 1G | 1M - 1G | 1M - 1G | 10kV                    |                           |                             |
| 4L               | 0.5W         |                      | 2M - 10M             | 2M - 10M  | —       | —       | —       | 1kV                     |                           |                             |
| 6L               | 0.6W         |                      | 1M - 500M            | 1M - 500M | 1M - 1G | 1M - 1G | 1M - 1G | 10kV                    |                           |                             |

## environmental applications

### Derating Curve



### Performance Characteristics

| Parameter                 | Requirement $\Delta R \pm (\% + 0.05\Omega)$ |         | Test Method                                      |
|---------------------------|----------------------------------------------|---------|--------------------------------------------------|
|                           | Limit                                        | Typical |                                                  |
| Resistance                | Within specified tolerance                   | —       | 25°C                                             |
| T.C.R.                    | Within specified tolerance                   | —       | Room temperature +100°C                          |
| Resistance to Solder Heat | 1                                            | 0.5     | 260°C $\pm$ 5°C, 10 seconds $\pm$ 1 second       |
| Temperature Cycling       | 1                                            | 0.5     | -25°C (30 minutes)/ +125°C (30 minutes) 5 cycles |
| Moisture Resistance       | 5                                            | 3       | 40°C $\pm$ 2°C, 90 - 95% RH, 1000 hours,         |
| Endurance @ 70°C          | 5                                            | 3       | Room temperature 1000 hours, Rated voltage       |