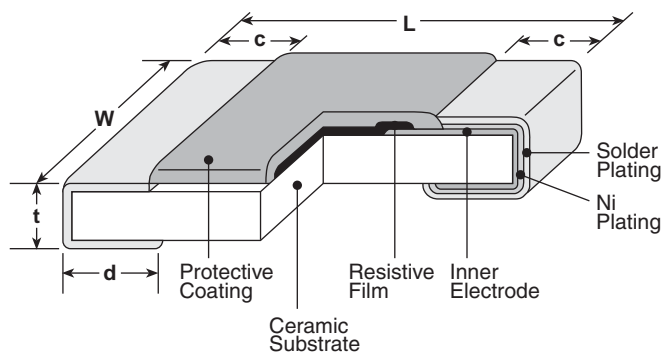


## features

- RuO<sub>2</sub> thick film resistor element
- Anti-leaching nickel barrier terminations
- Meets or exceeds EIA 575, EIAJ RC 2690A, EIA PDP-100, MIL-R-55342F
- Superior to RK73B/RK73H series in surge dielectric withstanding voltage
- Untrimmed chip resistor
- Marking: White three-digit on wine red protective coat, SG73P/S: White three-digit on green protective coating
- 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



| NEW | Type<br>(Inch Size Code)             | Dimensions inches (mm) |                         |  |  |                         |
|-----|--------------------------------------|------------------------|-------------------------|--|--|-------------------------|
|     |                                      | L                      | W                       | c  | d  | t                       |
|     | SG731J, SG73P1J<br>SG73S1J<br>(0603) | .063±.008<br>(1.6±0.2) | .031±.004<br>(0.8±0.1)  | .012±.004<br>(0.3±0.1)   | .012±.004<br>(0.3±0.1)   | .018±.004<br>(0.45±0.1) |
|     | SG732A<br>(0805)                     | .079±.008<br>(2.0±0.2) | .049±.004<br>(1.25±0.1) | .016±.008<br>(0.4±0.2)   | .012 <sup>+0.008</sup> <sub>-0.004</sub><br>(0.3 <sup>+0.2</sup> <sub>-0.1</sub> ) | .02±.004<br>(0.5±0.1)   |
|     | SG73P2A,<br>SG73S2A<br>(0805)        |                        |                         | .012 <sup>+0.008</sup> <sub>-0.004</sub><br>(0.3 <sup>+0.2</sup> <sub>-0.1</sub> ) |  |                         |
|     | SG732B<br>(1206)                     | .126±.008<br>(3.2±0.2) | .063±.008<br>(1.6±0.2)  | .02±.012<br>(0.5±0.3)  | .016 <sup>+0.008</sup> <sub>-0.004</sub><br>(0.4 <sup>+0.2</sup> <sub>-0.1</sub> ) | .024±.004<br>(0.6±0.1)  |
|     | SG73P2B,<br>SG73S2B<br>(1206)        |                        |                         | .016 <sup>+0.008</sup> <sub>-0.004</sub><br>(0.4 <sup>+0.2</sup> <sub>-0.1</sub> ) |  |                         |
|     | SG732E<br>(1210)                     | .102±.008<br>(2.6±0.2) | .102±.008<br>(2.6±0.2)  | .02±.012<br>(0.5±0.3)  | .016 <sup>+0.008</sup> <sub>-0.004</sub><br>(0.4 <sup>+0.2</sup> <sub>-0.1</sub> ) | .024±.004<br>(0.6±0.1)  |
|     | SG73P2E,<br>SG73S2E<br>(1210)        |                        |                         | .016 <sup>+0.008</sup> <sub>-0.004</sub><br>(0.4 <sup>+0.2</sup> <sub>-0.1</sub> ) |  |                         |
|     | SG732H<br>(2010)                     | .197±.008<br>(5.0±0.2) | .098±.008<br>(2.5±0.2)  | .02±.012<br>(0.5±0.3)  |  |                         |
|     | SG733A<br>(2512)                     | .248±.008<br>(6.3±0.2) | .122±.008<br>(3.1±0.2)  | .02±.012<br>(0.5±0.3)  |  |                         |

## ordering information

| New Part # | SG73                   | 2B                               | T  | TD  | 102  | K  |
|------------|------------------------|----------------------------------|--|---|--|--|
| Type       | SG73<br>SG73P<br>SG73S | Size                             | Termination Material   | Packaging   | Nominal Resistance   | Tolerance  |
|            |                        | 1J<br>2A<br>2B<br>2E<br>2H<br>3A | T: Sn<br>(Other termination styles may be available, please contact factory for options) | TP: 2mm pitch punched paper (0603 & 0805)<br>TD: 7" paper tape (0603, 0805, 1206 & 1210)<br>TDD: 10" paper tape (0805, 1206 & 1210)<br>TE: 7" punched plastic (0805, 1206, 1210, 2010 & 2512)<br>TED: 10" punched plastic (0805, 1206, 1210, 2010 & 2512) | ±0.5%, ±1%:<br>3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω<br>±2%, ±5%, ±10%, ±20%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω | D: ±0.5%<br>F: ±1%<br>G: ±2%<br>J: ±5%<br>K: ±10%<br>M: ±20% |

For further information on packaging, please refer to Appendix A.

## applications and ratings

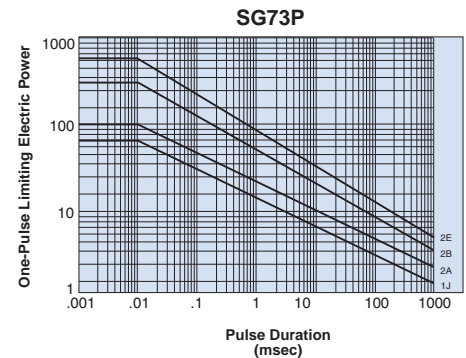
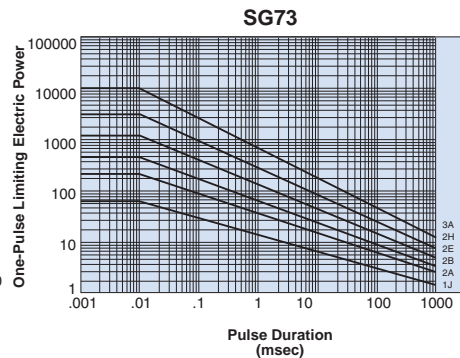
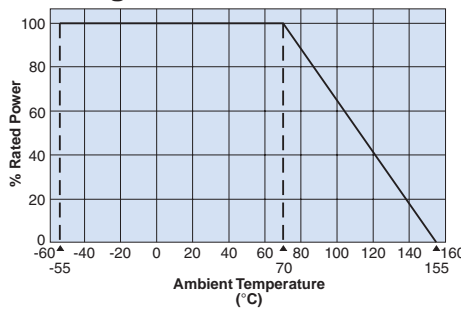
|     | Part Designation        | Power Rating @ 70°C | T.C.R. (ppm/°C) Max. | Resistance Range |               |                     |                       | Absolute Maximum Working Voltage | Absolute Maximum Overload Voltage | Operating Temp. Range |                 |                 |                 |                 |
|-----|-------------------------|---------------------|----------------------|------------------|---------------|---------------------|-----------------------|----------------------------------|-----------------------------------|-----------------------|-----------------|-----------------|-----------------|-----------------|
|     |                         |                     |                      | (E-24) (D±0.5%)  | (E-24) (F±1%) | (E-24) (G±2%, J±5%) | (E-12) (K±10%, M±20%) |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG73P1J, SG73S1J (0603) | 1/8W (.125W)        | ±200                 | 10Ω - 1MΩ        | 1Ω - 1MΩ      | 1Ω - 10MΩ           | —                     | 50V                              | 100V                              | -55°C to +155°C       |                 |                 |                 |                 |
|     | SG731J (0603)           | 1/16W (.063W)       | ±200                 | —                | —             | —                   | 10Ω - 1MΩ             |                                  |                                   |                       |                 |                 |                 |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 1Ω - 8.2Ω             |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG732A (0805)           | 1/8W (.125W)        | ±200                 | —                | —             | —                   | 10Ω - 1MΩ             | 150V                             | 200V                              |                       | -55°C to +155°C |                 |                 |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 1Ω - 8.2Ω             |                                  |                                   |                       |                 |                 |                 |                 |
|     |                         |                     |                      |                  |               |                     |                       |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG73S2A, SG73P2A (0805) | 1/4W (.25W)         | ±200                 | 10Ω - 1MΩ        | 1Ω - 1MΩ      | 1Ω - 10MΩ           | —                     | 200V                             | 400V                              |                       |                 | -55°C to +155°C |                 |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 10Ω - 1MΩ             |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG732B (1206)           | 1/4W (.25W)         | ±200                 | —                | —             | —                   | 10Ω - 1MΩ             | 200V                             | 400V                              |                       |                 |                 | -55°C to +155°C |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 1Ω - 8.2Ω             |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG73S2B, SG73P2B (1206) | 1/3W (.33W)         | ±200                 | 10Ω - 1MΩ        | 1Ω - 1MΩ      | 1Ω - 10MΩ           | —                     | 200V                             | 400V                              | -55°C to +155°C       |                 |                 |                 |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 10Ω - 1MΩ             |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG732E (1210)           | 1/3W (.33W)         | ±200                 | —                | —             | —                   | 10Ω - 1MΩ             | 200V                             | 400V                              |                       |                 |                 |                 | -55°C to +155°C |
|     |                         |                     | ±400                 | —                | —             | —                   | 1Ω - 8.2Ω             |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG73S2E, SG73P2E (1210) | 1/2W (.5W)          | ±200                 | 10Ω - 1MΩ        | 1Ω - 1MΩ      | 1Ω - 10MΩ           | —                     | 200V                             | 400V                              |                       | -55°C to +155°C |                 |                 |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 10Ω - 1MΩ             |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG732H (2010)           | 3/4W (.75W)         | ±200                 | —                | —             | —                   | 10Ω - 1MΩ             | 200V                             | 400V                              |                       |                 | -55°C to +155°C |                 |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 1Ω - 8.2Ω             |                                  |                                   |                       |                 |                 |                 |                 |
| NEW | SG733A (2512)           | 1W                  | ±200                 | —                | —             | —                   | 10Ω - 1MΩ             | 200V                             | 400V                              |                       |                 |                 | -55°C to +155°C |                 |
|     |                         |                     | ±400                 | —                | —             | —                   | 1Ω - 8.2Ω             |                                  |                                   |                       |                 |                 |                 |                 |

\* Parenthesis indicate EIA package size codes.

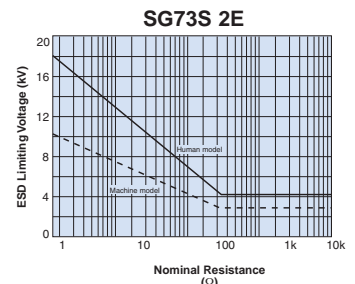
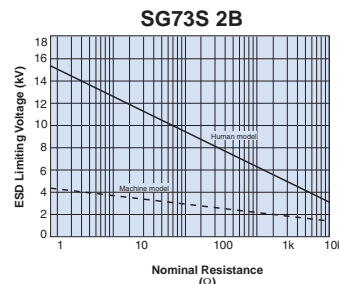
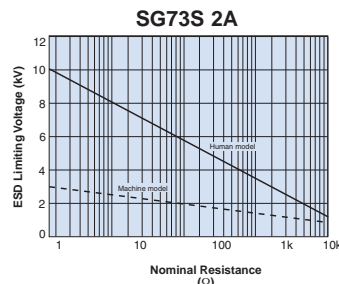
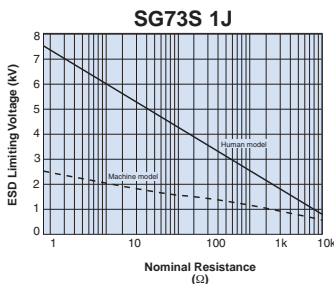
## environmental applications

### One-Pulse Limiting Electric Power

#### Derating Curve



#### ESD Limiting Voltage



For complete environmental specifications, please refer to pages 34-35.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

1/23/08