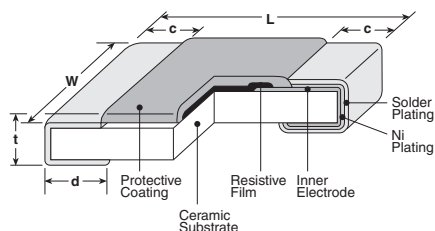


## features

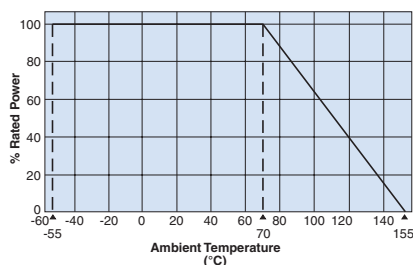
- Excellent anti-sulfuration characteristic due to using high sulfuration-proof inner top electrode material
- Excellent heat resistance and weather resistance are ensured by the use of metal glaze thick film
- High stability and high reliability with the triple-layer structure of electrode
- Suitable for both flow and reflow solderings
- Marking: Black protective coat on RK73B, RK73Z1J, 2A, 2B, 2E, W2H, W3A  
Blue protective coat on RK73H  
Green protective coat on RK73Z1E
- 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



## Derating Curve



## ordering information

| New Part # | RK73H          | 2A                                                      | RT                                                    | TD                                                                                                                                                                                                                                                                                                                                                                                                    | 1002                                                           | F                                                              |
|------------|----------------|---------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|
| Type       | RK73B<br>RK73H | 1E<br>1J<br>2A<br>2B<br>2E<br>W2H<br>W3A                | Termination Surface Material<br>RT: Sn<br>Anti-Sulfur | Packaging<br>TPL: 0402 only: 2mm pitch punch paper<br>TP: 0402, 0603, 0805: 7" 2mm pitch punch paper<br>TD: 0603, 0805, 1206, 1210: 7" 2mm pitch punched paper<br>TDD: 0603, 0805, 1206, 1210: 10" paper tape<br>TE: 0805, 1206, 1210, 2010 & 2512: 7" punched plastic<br>TED: 0805, 1206, 1210, 2010 & 2512: 10" punched plastic<br>For further information on packaging, please refer to Appendix A | Nominal Resistance<br>RK73B:<br>3 digits<br>RK73H:<br>4 digits | Resistance Tolerance<br>D: ±0.5%<br>F: ±1%<br>G: ±2%<br>J: ±5% |
| New Part # | RK73Z          | 2A                                                      | RT                                                    | TD                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                |                                                                |
| Type       |                | Current Rating<br>1E, 1J: 1A<br>2A, 2B, 2E,<br>W2H, W3A | Termination Surface Material<br>RT: Sn<br>Anti-Sulfur | Packaging<br>TPL: 0402 only: 2mm pitch punch paper<br>TP: 0402, 0603, 0805: 7" 2mm pitch punch paper<br>TD: 0603, 0805, 1206, 1210: 7" 2mm pitch punched paper<br>TDD: 0603, 0805, 1206, 1210: 10" paper tape<br>TE: 0805, 1206, 1210, 2010 & 2512: 7" punched plastic<br>TED: 0805, 1206, 1210, 2010 & 2512: 10" punched plastic<br>For further information on packaging, please refer to Appendix A |                                                                |                                                                |

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

10/30/08

### applications and ratings

| Part Designation     | Power Rating<br>@ 70°C | T.C.R.<br>(ppm/°C)<br>Max. | Resistance Range     |                    |               |               | Maximum Working Voltage | Maximum Overload Voltage | Rated Ambient Temp. | Operating Temp. Range |
|----------------------|------------------------|----------------------------|----------------------|--------------------|---------------|---------------|-------------------------|--------------------------|---------------------|-----------------------|
|                      |                        |                            | RK73H                |                    | RK73B         |               |                         |                          |                     |                       |
|                      |                        |                            | E24, E96<br>(D±0.5%) | E24, E96<br>(F±1%) | E24<br>(G±2%) | E24<br>(J±5%) |                         |                          |                     |                       |
| RK73B1E<br>RK73H1E   | 0.063W                 | ±200                       | —                    | 1.02MΩ - 10MΩ      | 10Ω - 10MΩ    | 1Ω - 10MΩ     | 50V                     | 100V                     | +70°C               | -55°C<br>to<br>+155°C |
|                      |                        | ±100                       | 100Ω - 1MΩ           | 10Ω - 1MΩ          | —             | —             |                         |                          |                     |                       |
| RK73B1J<br>RK73H1J   | 0.1W                   | ±200                       | —                    | 1.02MΩ - 10MΩ      | 10Ω - 10MΩ    | 1Ω - 10MΩ     |                         |                          |                     |                       |
|                      |                        | ±100                       | 100Ω - 1MΩ           | 10Ω - 1MΩ          | —             | —             |                         |                          |                     |                       |
| RK73B2A<br>RK73H2A   | 0.125W                 | ±200                       | —                    | 1.02MΩ - 10MΩ      | 10Ω - 10MΩ    | 1Ω - 10MΩ     | 150V                    | 200V                     |                     |                       |
|                      |                        | ±100                       | 100Ω - 1MΩ           | 10Ω - 1MΩ          | —             | —             |                         |                          |                     |                       |
| RK73B2B<br>RK73H2B   | 0.25W                  | ±200                       | —                    | 1.02MΩ - 10MΩ      | 10Ω - 10MΩ    | 1Ω - 10MΩ     | 200V                    | 400V                     |                     |                       |
|                      |                        | ±100                       | 100Ω - 1MΩ           | 10Ω - 1MΩ          | —             | —             |                         |                          |                     |                       |
| RK73B2E<br>RK73H2E   | 0.5W                   | ±200                       | —                    | —                  | 10Ω - 1kΩ     | 1Ω - 1kΩ      |                         |                          |                     |                       |
|                      | 0.33W                  |                            |                      |                    | 1.1kΩ - 1MΩ   | 1.1kΩ - 1MΩ   |                         |                          |                     |                       |
|                      | 0.5W                   | ±100                       | 100Ω - 1kΩ           | 10Ω - 1kΩ          | —             | —             |                         |                          |                     |                       |
|                      | 0.33W                  |                            | 1.02kΩ - 1MΩ         | 1.02kΩ - 1MΩ       | —             | —             |                         |                          |                     |                       |
| RK73BW2H<br>RK73HW2H | 0.75W                  | ±200                       | —                    | 1.02MΩ - 10MΩ      | 10Ω - 10MΩ    | 1Ω - 10MΩ     |                         |                          |                     |                       |
|                      |                        | ±100                       | 10Ω - 1MΩ            | 10Ω - 1MΩ          | —             | —             |                         |                          |                     |                       |
| RK73BW3A<br>RK73HW3A | 1W                     | ±200                       | —                    | 1.02MΩ - 10MΩ      | 10Ω - 10MΩ    | 1Ω - 10MΩ     |                         |                          |                     |                       |
|                      |                        | ±100                       | 10Ω - 1MΩ            | 10Ω - 1MΩ          | —             | —             |                         |                          |                     |                       |

| Part Designation* | Resistance | Current Rating | Maximum Surge Current | Rated Ambient Temperature | Operating Temperature Range |
|-------------------|------------|----------------|-----------------------|---------------------------|-----------------------------|
| RK73Z1E           | 50mΩ max.  | 1A             | 2A                    | +70°C                     | -55°C to +155°C             |
| RK73Z1J           |            |                |                       |                           |                             |
| RK73Z2A           |            | 5A             |                       |                           |                             |
| RK73Z2B           |            | 10A            |                       |                           |                             |
| RK73Z2E           |            |                |                       |                           |                             |
| RK73ZW2H          |            |                |                       |                           |                             |
| RK73ZW3A          |            |                |                       |                           |                             |

### environmental applications

#### Performance Characteristics

| Parameter                   | RK73H, RK73B Requirement Δ R    |                                     | RK73Z Requirement Δ R |         | Test Method                                                                                                                        |
|-----------------------------|---------------------------------|-------------------------------------|-----------------------|---------|------------------------------------------------------------------------------------------------------------------------------------|
|                             | Limit                           | Typical                             | Limit                 | Typical |                                                                                                                                    |
| Resistance                  | Within specified tolerance      | —                                   | R≤50mΩ                | R≤40mΩ  | 25°C                                                                                                                               |
| T.C.R.                      | Within specified T.C.R.         | —                                   | N/A                   | N/A     | +25°C/-55°C and +25°C/+125°C                                                                                                       |
| Overload (Short time)       | ±2%                             | ±0.8%                               | R≤50mΩ                | R≤40mΩ  | RK73B, RK73H Rated Voltage x 2.5 for 5 seconds<br>(2B: Rated Voltage x 2 for 5 seconds)<br>RK73Z: Max. surge current for 5 seconds |
| Resistance to Solder Heat   | ±1%, ±3%*                       | ±1%, ±0.5%**                        | R≤50mΩ                | R≤40mΩ  | 260°C ± 5°C, 10 seconds ± 1 second                                                                                                 |
| Rapid Change of Temperature | ±0.5%                           | ±0.3%                               | R≤50mΩ                | R≤40mΩ  | -55°C (30 minutes), +125°C (30 minutes), 100 cycles                                                                                |
| Moisture Resistance         | ±2%: 1J, 2A, 2B<br>±3%: Another | ±0.75%: 1J, 2A, 2B;<br>±1%: Another | R≤100mΩ               | R≤50mΩ  | 40°C ± 2°C, 90%-95% RH, 1000 hours,<br>1.5 hr ON, 0.5 hr OFF cycle                                                                 |
| Endurance at 70°C           | ±2%: 1J, 2A, 2B<br>±3%: Another | ±0.75%: 1J, 2A, 2B;<br>±1%: Another | R≤100mΩ               | R≤50mΩ  | 70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle                                                                                |
| High Temperature Exposure   | ±1%                             | ±0.5%                               | R≤50mΩ                | R≤40mΩ  | +155°C, 1000 hours                                                                                                                 |
| Sulfuration Test            | —                               | ±0.5%                               | —                     | R≤40mΩ  | H <sub>2</sub> S 1000 ppm, 25°C, 90%Rh, 720 hours                                                                                  |

\* ±1%: 10Ω≤R≤1MΩ; ±3%: R<10Ω, R>1MΩ

\*\* ±1%: R<10Ω, R>1MΩ; ±0.5%: Another

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

10/30/08