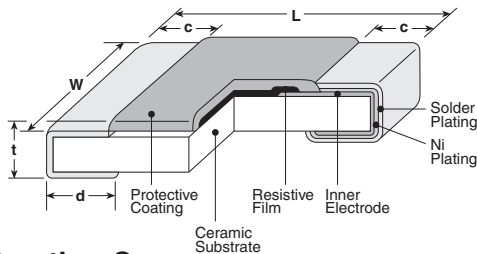


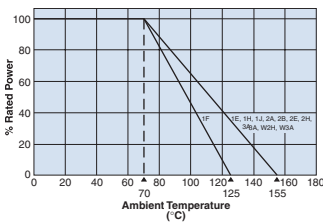
features

- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified: 0201 (1H), 0402 (1E), 0603 (1J), 0805 (2A), 1206 (2B), 1210 (2E), 2010 (2H/W2H), 2512 (3A/W3A/W3A2)

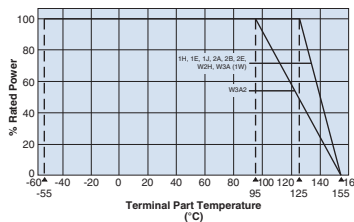
dimensions and construction



Derating Curve



For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.



For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the above derating curve. Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use.

| Type* (Inch Size Code) | Dimensions inches (mm) | | | | |
|---------------------------|---|--------------------------|-------------------------|---|---------------------------|
| | L | W | c | d | t |
| 1F (01005) | .016±.0008 (0.4±0.02) | .008±.0008 (0.2±0.02) | .004±.001 (0.1±0.03) | .004±.001 (0.11±0.03) | .005±.0008 (0.13±0.02) |
| 1H (0201) | .024±.001 (0.6±0.03) | .012±.001 (0.3±0.03) | .004±.002 (0.1±0.05) | .006±.002 (0.15±0.05) | .009±.001 (0.23±0.03) |
| 1E (0402) | .039 ^{+0.004} _{-0.002} (1.0 ^{+0.1} _{-0.05}) | .02±.002 (0.5±0.05) | .008±.004 (0.2±0.1) | .01 ^{+0.002} _{-0.004} (0.25 ^{+0.05} _{-0.1}) | .014±.002 (0.35±0.05) |
| 1J (0603) | .063±.008 (1.6±0.2) | .031±.004 (0.8±0.1) | .012±.004 (0.3±0.1) | .012±.004 (0.3±0.1) | .018±.004 (0.45±0.1) |
| 2A (0805) | .079±.008 (2.0±0.2) | .049±.004 (1.25±0.1) | .016±.008 (0.4±0.2) | .012 ^{+0.008} _{-0.004} (0.3 ^{+0.2} _{-0.1}) | .02±.004 (0.5±0.1) |
| 2B (1206) | .126±.008 (3.2±0.2) | .063±.008 (1.6±0.2) | .02±.012 (0.5±0.3) | .016 ^{+0.008} _{-0.004} (0.4 ^{+0.2} _{-0.1}) | .024±.004 (0.6±0.1) |
| 2E (1210) | | .102±.008 (2.6±0.2) | | | |
| 2H (2010) | .197±.008 (5.0±0.2) | .098±.008 (2.5±0.2) | | | |
| W2H (2010) | | | | .026±.006 (0.65±0.15) | |
| 3A (2512) | .248±.008 (6.3±0.2) | .122±.008 (3.1±0.2) | | .016 ^{+0.008} _{-0.004} (0.4 ^{+0.2} _{-0.1}) | |
| W3A/W3A2 (2512) | | | | .026±.006 (0.65±0.15) | |

* Parentheses indicate EIA package size codes.

ordering information

| RK73H | 2B | T | TD | 1003 | F |
|-------|--|---|--|--|--------------------|
| Type | Size | Termination Material | Packaging | Nominal Resistance | Tolerance |
| | 1F 1H 1E 1J 2A 2B 2E W2H W3A 2H 3A New W3A2 | T: Sn (1F ~ W3A2) Contact factory for below options: L: SnPb (1E, 1J, 2A, 2B, 2E, 2H, 3A) G: Au (1E ~ 2A: 10Ω ~ 1MΩ) | TX: 01005 only: 4mm width - 1mm pitch plastic embossed TBL: 01005 only: 2mm pitch pressed paper TA: 0201 only: 1mm pitch pressed paper TC: 0201 only: 7" 2mm pitch pressed paper (TC: 10,000 pcs/reel, TCM: 15,000 pcs/reel) TCD: 0201 only: 10" 2mm pitch pressed paper TPD: 0402 only: 10" plastic embossed TPL: 0402 only: 2mm pitch punch paper TP: 0402, 0603, 0805: 7" 2mm pitch punch paper TD: 0603, 0805, 1206, 1210: 7" 4mm pitch punched paper TDD: 0603, 0805, 1206, 1210: 10" paper tape TE: 0805, 1206, 1210, 2010 & 2512: 7" embossed plastic TED: 0805, 1206, 1210, 2010 & 2512: 10" embossed plastic For further information on packaging, please refer to Appendix A | 3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω | D: ±0.5% F: ±1% |

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

11/03/17



KOA SPEER ELECTRONICS, INC.

applications and ratings

RK73H

precision 0.5%, 1% tolerance
thick film chip resistor

resistors

| Part Designation | Power Rating | Rated Ambient Temp. | Rated Terminal Part Temp. | T.C.R. (x10 ⁻⁶ /K) | Resistance Range | | Maximum Working Voltage | Maximum Overload Voltage | Operating Temperature Range |
|-----------------------------|--------------|---------------------|---------------------------|--------------------------------|-------------------|--------------------------------|-------------------------|--------------------------|-----------------------------|
| | | | | | D±0.5% E-24, E-96 | F±1% E-24, E-96 | | | |
| RK73H1F (01005) | 0.03W | 70°C | 125°C | ±200 | — | 100kΩ - 2MΩ ¹ | 20V | 30V | -55°C to +125°C |
| | | | | ±250 | — | 10Ω - 91kΩ ¹ | | | |
| RK73H1H (0201) | 0.05W | | | ±200 | 10Ω - 1MΩ | 10Ω - 10MΩ ¹ | 25V | 50V | |
| | | | | ±400 | — | 1.0Ω - 9.1Ω ¹ | | | |
| RK73H1E (0402) | 0.1W | | | ±100 | 10Ω - 1MΩ | 10Ω - 1MΩ | 50V | 100V | |
| | | | | ±200 | — | 1.0Ω - 9.76Ω 1.02MΩ - 10MΩ | | | |
| RK73H1J (0603) | 0.1W | | | ±100 | 1.02kΩ - 1MΩ | 1.02kΩ - 1MΩ | 75V | | |
| | | | | ±200 | — | 1.02MΩ - 10MΩ | | | |
| RK73H1J (0603) | 0.125W | | | ±100 | 10Ω - 1kΩ | 10Ω - 1kΩ | 75V | | |
| | | | | ±200 | — | 1.0Ω - 9.76Ω | | | |
| RK73H2A (0805) | 0.25W | | | ±100 | 10Ω - 1MΩ | 10Ω - 1MΩ | 150V | 200V | |
| | | | | ±200 | — | 1.0Ω - 9.76Ω | | | |
| | | | | ±400 | — | 1.02MΩ - 10MΩ | | | |
| RK73H2B (1206) | 0.25W | | | ±100 | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | |
| | | ±200 | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | | | |
| | | ±400 | — | 5.62MΩ - 10MΩ | | | | | |
| RK73H2E (1210) | 0.5W | ±100 | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | | | |
| | | ±200 | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | | | |
| | | ±400 | — | 5.62MΩ - 10MΩ | | | | | |
| RK73HW2H/2H (2010) | 0.75W | ±100 | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | | | |
| | | ±200 | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | | | |
| | | ±400 | — | 5.62MΩ - 10MΩ | | | | | |
| RK73HW3A/3A (2512) | 1.0W | ±100 | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | | | |
| | | ±200 | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | | | |
| | | ±400 | — | 5.62MΩ - 10MΩ | | | | | |
| NEW RK73HW3A2 (2512) | 2.0W | — | 95°C | ±100 | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | |
| | | | | ±200 | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | |
| | | | | ±400 | — | 5.62MΩ - 10MΩ | | | |

Rated voltage = √Power rating x resistance value or max. working voltage, whichever is lower ¹ 1F: 10-2MΩ; E-24. 1H: 1.0-9.1, 1M-10MΩ; E-24. If any questions arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature," please give priority to the "Rated Terminal Part Temperature." Prior to use and for more details refer to "Introduction of the derating curves based on the terminal part temperature" in the beginning of the catalog. While using under high power, the temperature of the product may increase depending on the condition of heat dissipation from PCB. Be sure to check the terminal part temperature as well as precautions to use on delivery specification before use.

environmental applications Performance Characteristics

| Parameter | Requirement Δ R (%+0.1%) | | Test Method |
|------------------------------|--|--|---|
| | Limit | Typical | |
| Resistance | Within specified tolerance | — | 25°C |
| T.C.R. | Within specified T.C.R. | — | +25°C/-55°C and +25°C/+125°C |
| Overload (Short time) | ±2% | ±1%: 1F ±0.5% Another | Rated Voltage x 2.5 for 5 seconds (1E, 2B, W3A2: Rated Voltage x 2 for 5 seconds) |
| Resistance to Soldering Heat | ±1%: 1F ~ W3A2 (10Ω≤R≤1MΩ); ±3%: 1H ~ W3A2 (R<10Ω, R>1MΩ) | ±0.5%: 1F ~ W3A2 (10Ω<R<1MΩ); ±1%: 1H ~ W3A2 (R<10Ω, R>1MΩ) | 260°C ± 5°C, 10 seconds ± 1 second |
| Rapid Change of Temperature | ±1%: 1F ±0.5% Another | ±0.5%: 1F ±0.3% Another | -55°C (30 minutes), +125°C (30 minutes), 100 cycles |
| Moisture Resistance | ±2%: 1J, 2A, 2B ±3%: Another | ±0.75%: 1J, 2A, 2B; ±1.5%: 1F, ±1%: Another | 40°C ± 2°C, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Endurance at 70°C | ±2%: 1J, 2A, 2B ±3%: Another | ±0.75%: 1J, 2A, 2B ±1%: Another | 70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| High Temperature Exposure | ±1% | ±0.5%: 1F ±0.3%: Another | +125°C, 1000 hours: 1F; +155°C, 1000 hours: 1E, 1H, 1J, 2A, 2B, 2E, 2H/W2H, 3A/W3A/W3A2 |

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

11/03/17