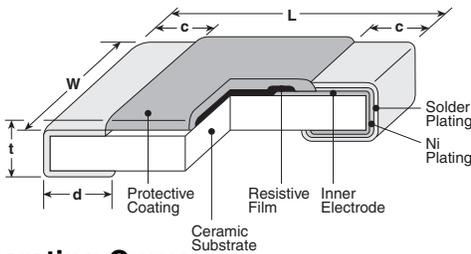


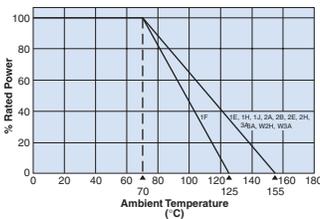
features

- Marking: 1F, 1H: no marking, black body
1E: blue body, no marking
1J: three-digit black marking (E-24 only)
on blue protective coat. 2A ~ 3A four-digit
black marking on blue protective coat.
- 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)

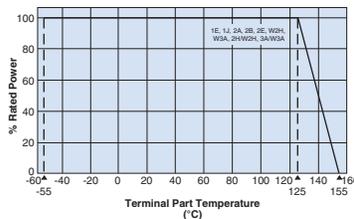
dimensions and construction



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" on 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 ^{+0.04} _{-.002} (1.0 ^{+0.1} _{-.05}) | .02±.002 (0.5±0.05) | .008±.004 (0.2±0.1) | .01 ^{+0.02} _{-.004} (0.25 ^{+0.05} _{-.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 ^{+0.08} _{-.004} (0.3 ^{+0.2} _{-.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 ^{+0.08} _{-.004} (0.4 ^{+0.2} _{-.1}) | .024±.004 (0.6±0.1) |
| 2E (1210) | .102±.008 (2.6±0.2) | .026±.006 (0.65±0.15) | | | |
| 2H (2010) | .197±.008 (5.0±0.2) | .098±.008 (2.5±0.2) | | | |
| W2H (2010) | | | | .016 ^{+0.08} _{-.004} (0.4 ^{+0.2} _{-.1}) | |
| 3A (2512) | .248±.008 (6.3±0.2) | .122±.008 (3.1±0.2) | | .026±.006 (0.65±0.15) | |
| W3A (2512) | | | | | |

* Parentheses indicate EIA package size codes.

ordering information

| New Part # | RK73H | 2B | T | TD | 1003 | F |
|------------|-------|--|---|--|--|---------------------------------|
| Type | | | | | | |
| Size | | 1F 1H 1E 1J 2A 2B 2E 2H W2H W3A 2H 3A | Termination Material T: Sn (1F ~ 3A) Contact factory for below options: L: SnPb (1E, 1J, 2A, 2B, 2E, 2H, 3A) G: Au (1E ~ 2A: 10Ω ~ 1MΩ) X: Bondable (1J ~ 2E: 10Ω ~ 1MΩ) | Packaging 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 | Nominal Resistance 3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω | Tolerance D: ±0.5% F: ±1% |

applications and ratings

| Part Designation | T.C.R. (x10 ⁻⁶ /K) | Power Rating @ 70°C | Resistance Range | | Maximum Working Voltage | Maximum Overload Voltage | Rated Terminal Part Temperature | Operating Temperature Range |
|-----------------------|----------------------------------|------------------------|----------------------|---------------------------------|-------------------------|--------------------------|---------------------------------|-----------------------------|
| | | | D±0.5% E-24, E-96 | F±1% E-24, E-96 | | | | |
| RK73H1F (01005) | ±200 | 0.03W | — | 100kΩ - 1MΩ ¹ | 20V | 30V | — | -55°C to +125°C |
| | ±250 | | — | 100Ω - 91kΩ ¹ | | | | |
| | ±300 | | — | 10Ω - 91Ω ¹ | | | | |
| RK73H1H (0201) | ±200 | 0.05W | 10Ω - 1MΩ | 10Ω - 10MΩ ¹ | 25V | 50V | — | — |
| | ±400 | | — | 1.0Ω - 9.1Ω ¹ | | | | |
| RK73H1E (0402) | ±100 | 0.063W (0.1W*) | 10Ω - 1MΩ | 10Ω - 1MΩ | 50V | 100V | — | — |
| | ±200 | | — | 1.0Ω - 9.76Ω 1.02MΩ - 10MΩ | | | | |
| RK73H1J (0603) | ±100 | 0.1W (0.125W*) | 10Ω - 1MΩ | 10Ω - 1MΩ | 150V | 200V | — | — |
| | ±200 | | — | 1.0Ω - 9.76Ω 1.02MΩ - 10MΩ | | | | |
| RK73H2A (0805) | ±100 | 0.125W (0.25W*) | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | 125°C | -55°C to +155°C |
| | ±200 | | — | 1.0Ω - 9.76Ω | | | | |
| | ±400 | | — | 1.02MΩ - 10MΩ | | | | |
| RK73H2B (1206) | ±100 | 0.25W | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | 125°C | -55°C to +155°C |
| | ±200 | | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | | |
| | ±400 | | — | 5.62MΩ - 10MΩ | | | | |
| RK73H2E (1210) | ±100 | 0.5W | 10Ω - 1kΩ | 10Ω - 1KΩ | 200V | 400V | 125°C | -55°C to +155°C |
| | ±200 | 0.33W (0.5W*) | 1.02kΩ - 1MΩ | 1.02KΩ - 1MΩ | | | | |
| | ±200 | 0.5W | — | 1.0Ω - 9.76Ω | | | | |
| | ±400 | 0.33W (0.5W*) | — | 1.02MΩ - 5.6MΩ 5.62MΩ - 10MΩ | | | | |
| RK73HW2H/2H (2010) | ±100 | 0.75W | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V | 400V | 125°C | -55°C to +155°C |
| | ±200 | | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | | |
| | ±400 | | — | 5.62MΩ - 10MΩ | | | | |
| RK73HW3A/3A (2512) | ±100 | 1.0W | 10Ω - 1MΩ | 10Ω - 1MΩ | 200V (500V*) | 400V (500V*) | 125°C | -55°C to +155°C |
| | ±200 | | — | 1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ | | | | |
| | ±400 | | — | 5.62MΩ - 10MΩ | | | | |

Rated ambient temperature: +70°C

¹1F: 10~1MΩ; E-24. 1H: 1.0~9.1, 1M~10MΩ; E-24.

Rated voltage = √Power rating x resistance value or max. working voltage, whichever is lower

* Please refer to the "Higher Power Ratings" statement in the beginning of the catalog. Also, contact KOA prior to usage and for the max. working voltage and max. overload voltage.

environmental applications

Performance Characteristics

| Parameter | Requirement Δ R (%+0.1Ω) | | 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 (2B: Rated Voltage x 2 for 5 seconds) |
| Resistance to Soldering Heat | ±1%: 1F ~ W3A (10Ω≤R≤1MΩ); ±3%: 1H ~ W3A (R<10Ω, R>1MΩ) | ±0.5%: 1F ~ W3A (10Ω<R<1MΩ); ±1%: 1H ~ W3A (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 |

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

12/05/14

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