



RK73H

Precision 0.5%, 1% tolerance thick film chip resistor



Order Samples

[Sample Order Form](#)



Downloads

[Catalog Pages](#)

[Introduction of the Derating Curves Based on the Terminal Part Temperature](#)

[Terms and Definitions/Environmental Applications](#)

[Appendix A - Packaging](#)

[Marking and Standard Values](#)

[Pad Dimensions](#)

[Material Declaration Data Sheet](#)

[Lab Kit Data Sheet](#)

[Surface Temperature Rise Graph](#)

[EU-RoHS * CHINA RoHS](#)

[Resistors Caution & Terms](#)

[Pb-Free Components Recommended Soldering Information and Profile](#)

Links

[P/N Cross Reference](#)

[FAQs](#)

Surface Mount Resistors

RK73B

General purpose 2%, 5% tolerance thick film chip resistor

RK73H

Precision 0.5%, 1% tolerance thick film chip resistor

RK73G

Thick film 0.5%, 1% tolerance, 50ppm/°C chip resistor

RK73-RT

Flat chip resistor (Anti-Sulfuration)

WG73

Wide terminal type surge current flat chip resistors (anti surge)

RS73

high reliability chip resistors

RK73G-RT

Flat chip resistor (Ultra precision grade, Anti-Sulfuration)

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)



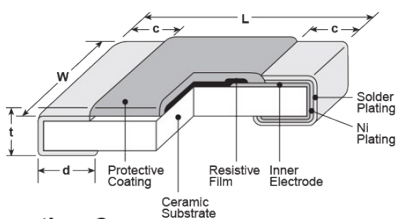
Go to: [Ordering Information](#) | [Applications and Ratings](#) | [Environmental Applications](#) |

[Introduction of the Derating Curves Based on the Terminal Part Temperature \(PDF\)](#)

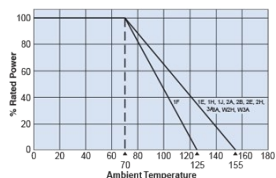
Dimensions and Construction

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 (0.1±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)	.02±.012 (0.5±0.3)	.016 ^{+0.008} _{-0.004} (0.4 ^{+0.2} _{-0.1})	.024±.004 (0.6±0.1)
W2H (2010)					
3A (2512)	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)	.026±.006 (0.65±0.15)	.016 ^{+0.008} _{-0.004} (0.4 ^{+0.2} _{-0.1})	.026±.006 (0.65±0.15)
W3A/W3A2 (2512)					

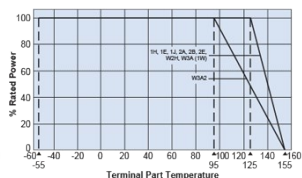
* Parentheses indicate EIA package size codes.



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.

Ordering Information

RK73H	2B	T	TD	1003	F
Type	1F 1H 1E 1J 2A 2B 2E W2H W3A 2H 3A W3A2	Termination Material T: Sn (1F ~ W3A2) Contact factory for below options: L: SnPb (1E, 1J, 2A, 2B, 2E, 2H, 3A) G: Au (1E ~ 2A: 10Ω ~ 1MΩ)	Packaging TX: 01005 only: 4mm width - 1mm pitch plastic embossed TBL: 01005 only: 2mm 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" 2mm pitch 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

Standard Decade Values (E-12, E-24, E-96, E-192)

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	—	±200	—	100kΩ - 2MΩ*	20V	30V	-55°C to +125°C	
RK73H1H (0201)	0.05W			±250	—	10Ω - 91kΩ*				25V
RK73H1E (0402)	0.1W			±200	10Ω - 1MΩ	10Ω - 10MΩ*	75V	100V		
				±400	—	1.0Ω - 9.1kΩ*				
RK73H1J (0603)	0.1W			±100	10Ω - 1MΩ	10Ω - 1MΩ	75V	100V		
	0.125W			±200	—	1.0Ω - 9.76Ω 1.02MΩ - 10MΩ				
RK73H2A (0805)	0.25W			±100	1.02kΩ - 1MΩ	1.02kΩ - 1MΩ	150V	200V		
				±200	—	1.0Ω - 9.76Ω				
RK73H2B (1206)	0.25W			±400	—	1.02MΩ - 10MΩ	200V	400V		
				±100	10Ω - 1MΩ	10Ω - 1MΩ				
RK73H2E (1210)	0.5W		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ	200V	400V			
			±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					
RK73HW3A/3A (2512)	1.0W		±400	—	5.62MΩ - 10MΩ	200V	400V			
			±100	10Ω - 1MΩ	10Ω - 1MΩ					
RK73HW3A2 (2512)	2.0W		—	95°C	±100	10Ω - 1MΩ	10Ω - 1MΩ	200V	400V	-55°C to +155°C
					±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

* 1F: 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.

XR73B/XR73H/XR73Z

flat thick film resistors (for embedded substrates)

RS73-RT

high reliability chip resistors (anti-sulfuration)

WK73R

Wide terminal type flat chip resistor

WK73R (Higher Power)

Higher power wide terminal type flat chip resistor

WK73-RT

Wide terminal type flat chip resistor (Anti-Sulfuration)

WK73-RT (Higher Power)

Higher power wide terminal type flat chip resistor (Anti-Sulfuration)

RN73

Ultra precision 0.05%, 0.1%, 1% tolerance thin film chip resistor.

Not Recommended for New Design
Recommended Replacement RN73R

RN73H

High heat resistance, high reliability metal film chip resistor

RN73R

metal film flat chip resistors (high reliability)

HV73

Flat chip resistors for high voltage

HRK73

High Temperature, Gold Termination Thick Film

HV73-RT

Flat chip resistors for high voltage (Anti-Sulfuration)

SHDR

Microwave thin film chip resistors
EOL

HV73V

Flat chip resistors for high voltage (Automotive)

HV73V-RT

Flat chip resistors for high voltage (Automotive- Anti-Sulfuration)

SG73

anti-surge thick film chip resistor

SG73-RT

surge current flat chip resistors (anti-surge, anti-sulfuration)

SG73G

endured pulse power flat chip resistors (ultra precision grade)

SG73P

Anti-surge endured pulse power thick film chip resistor

SG73S

Anti-surge endured surge voltage thick film chip resistor

SG73P-RT

Endured pulse power flat chip resistors (Anti-surge, anti-sulfuration)

SG73S-RT

Endured surge voltage flat chip resistors (Anti-surge, anti-sulfuration)

RK73Z

Zero ohm jumper chip resistor

RF73

Fusing flat chip resistor

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 (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

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