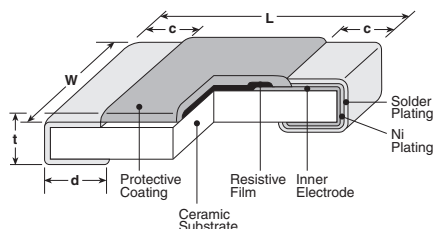


features

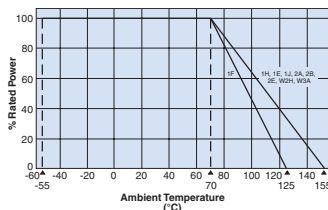
- Excellent anti-sulfuration characteristic due to using high sulfuration-proof inner top electrode material
- Excellent heat resistance and weather resistance are ensured by the use of metal glaze thick film
- High stability and high reliability with the triple-layer structure of electrode
- Marking: Z1H: Green protective coating
RK73B1F ~ W3A, RK73Z1J ~ W3A: Black protective coating
RK73H1F ~ W3A: Blue protective coating
- 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 (W2H), 2512 (W3A)



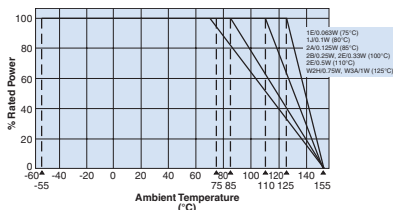
dimensions and construction



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
NEW 1F (01005)	.016±.001 (0.4±0.02)	.008±.001 (0.2±0.02)	.004±.001 (0.1±0.03)	.004±.001 (0.11±0.03)	.005±.001 (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} _{-.002} (1.0 ^{+0.1} _{-.05})	.02±.002 (0.5±0.05)	.008±.004 (0.2±0.1)	.01 ^{+0.002} _{-.004} (0.25 ^{+0.05} _{-.01})	.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} _{-.004} (0.3 ^{+0.2} _{-.01})	.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} _{-.004} (0.4 ^{+0.2} _{-.01})	.024±.004 (0.6±0.1)
2E (1210)		.102±.008 (2.6±0.2)			
W2H (2010)	.197±.008 (5.0±0.2)	.098±.008 (2.5±0.2)		.023±.006 (0.65±0.15)	
W3A (2512)	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)			

ordering information

New Part #	RK73H	2A	RT	TD	1002	F
Type	RK73B RK73H RK73Z	NEW 1F 1H 1E 1J 2A 2B 2E W2H W3A	Termination Surface Material RT: Sn Anti-Sulfur	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) 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 RK73B: 3 digits RK73H: 4 digits RK73Z: None	Resistance Tolerance D: ±0.5% F: ±1% G: ±2% J: ±5%

applications and ratings

RK73B/RK73H

RESISTOR CODES													
	Part Designation	T.C.R. (ppm/°C) Max.	Power Rating @ 70°C	Resistance Range				Maximum Working Voltage	Maximum Overload Voltage	Rated Terminal Part Temp.	Operating Temp. Range		
				RK73H		RK73B							
				D±0.5% E24, E96	F±1% E24, E96	G±2% E24	J±5% E24						
NEW	1F	0 - +300	0.03W	—	—	1Ω - 9.1Ω	1Ω - 9.1Ω	20V	30V	—	-55°C to +125°C		
		±300			10Ω - 91Ω*	10Ω - 91Ω	10Ω - 91Ω						
		±250			100Ω - 91kΩ*	100Ω - 91kΩ	100Ω - 91kΩ						
		±200			100kΩ - 1MΩ*	100kΩ - 1MΩ	100kΩ - 1MΩ						
	1H	±300	0.05W	—	10Ω - 97.6Ω	—	10Ω - 91Ω	25V	50V		-55°C to +155°C		
		±200			100Ω - 1MΩ		100 - 1M						
	1E	±200	0.063W	—	1.02MΩ - 10MΩ	10Ω - 10MΩ	1Ω - 10MΩ	50V	100V	75°C			
		±100		100Ω - 1MΩ	10Ω - 1MΩ	—	—			80°C			
	1J	±200	0.1W	—	1.02MΩ - 10MΩ	10Ω - 10MΩ	1Ω - 10MΩ						
		±100		100Ω - 1MΩ	10Ω - 1MΩ	—	—						
	2A	±200	0.125W	—	1.02MΩ - 10MΩ	10Ω - 10MΩ	1Ω - 10MΩ	150V	200V	85°C			
		±100		100Ω - 1MΩ	10Ω - 1MΩ	—	—						
	2B	±200	0.25W	—	1.02MΩ - 10MΩ	10Ω - 10MΩ	1Ω - 10MΩ	200V	400V	100°C			
		±100		100Ω - 1MΩ	10Ω - 1MΩ	—	—			110°C			
	2E	±200	0.5W	—	—	10Ω - 1kΩ	1Ω - 1kΩ			100°C			
		0.33W				1.1kΩ - 1MΩ	1.1kΩ - 1MΩ			100°C			
		±100	0.5W	100Ω - 1kΩ	10Ω - 1kΩ	—	—			110°C			
			0.33W	1.02kΩ - 1MΩ	1.02kΩ - 1MΩ					100°C			
	W2H	±200	0.75W	—	1.02MΩ - 10MΩ	10Ω - 10MΩ	1Ω - 10MΩ			125°C			
		±100		10Ω - 1MΩ	10Ω - 1MΩ	—	—						
	W3A	±200	1W	—	1.02MΩ - 10MΩ	10Ω - 10MΩ	1Ω - 10MΩ						
		±100		10Ω - 1MΩ	10Ω - 1MΩ	—	—						

Rated ambient temperature: +70°C

Rated voltage = $\sqrt{\text{Power rating} \times \text{resistance value}}$ or max. working voltage, whichever is lower

* The nominal resistance value for RK73H1F (F:±1%) is E24

RK73Z

	Part Designation	Resistance	Current Rating	Maximum Surge Current	Rated Ambient Temperature	Operating Temperature Range	
NEW	1H	100mΩ max.	0.5A	1A	+70°C	-55°C to +155°C	
	1E	50mΩ max.	1A	2A			
	1J			5A			
	2A						
	2B		2A	10A			
	2E						
	W2H						
	W3A						

environmental applications

Performance Characteristics

Parameter	RK73H, RK73B Requirement ΔR $\pm(\%+0.1\Omega)$		RK73Z Requirement		Test Method
	Limit	Typical	Limit	Typical	
Resistance	Within specified tolerance	—	R $\leq$ 100m Ω : 1H R $\leq$ 50m Ω : All others	R $\leq$ 90m Ω : 1H R $\leq$ 40m Ω : All others	25°C
T.C.R.	Within specified T.C.R.	—	—	—	+25°C/-55°C and +25°C/+125°C
Overload (Short time)	$\pm 2\%$	$\pm 1\%$: 1F $\pm 0.8\%$: All others	R $\leq$ 100m Ω : 1H R $\leq$ 50m Ω : All others	R $\leq$ 90m Ω : 1H R $\leq$ 40m Ω : All others	RK73B, RK73H Rated Voltage x 2.5 for 5 seconds (2B: Rated Voltage x 2 for 5 seconds) RK73Z: Max. overload current for 5 seconds
Resistance to Solder Heat	$\pm 1\%$: 10 Ω $\leq$ R $\leq$ 1M Ω $\pm 3\%$: R $<$ 10 Ω , R $>$ 1M Ω	$\pm 1\%$: R $<$ 10 Ω , R $>$ 1M Ω $\pm 0.5\%$: All others	R $\leq$ 100m Ω : 1H R $\leq$ 50m Ω : All others	R $\leq$ 90m Ω : 1H R $\leq$ 40m Ω : All others	260°C $\pm$ 5°C, 10 seconds $\pm$ 1 second
Rapid Change of Temperature	$\pm 1\%$: 1F $\pm 0.5\%$: All others	$\pm 1\%$: 1F $\pm 0.3\%$: All others	R $\leq$ 100m Ω : 1H R $\leq$ 50m Ω : All others	R $\leq$ 90m Ω : 1H R $\leq$ 40m Ω : All others	-55°C (30 minutes), +125°C (30 minutes), 100 cycles
Moisture Resistance	$\pm 2\%$: 1J, 2A, 2B $\pm 3\%$: All others	$\pm 0.75\%$: 1J, 2A, 2B $\pm 1.5\%$: 1F $\pm 1\%$: All others	R $\leq$ 150m Ω : 1H R $\leq$ 100m Ω : All others	R $\leq$ 100m Ω : 1H R $\leq$ 50m Ω : All others	40°C $\pm$ 2°C, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	$\pm 2\%$: 1J, 2A, 2B $\pm 3\%$: All others	$\pm 0.75\%$: 1J, 2A, 2B $\pm 1\%$: All others	R $\leq$ 150m Ω : 1H R $\leq$ 100m Ω : All others	R $\leq$ 100m Ω : 1H R $\leq$ 50m Ω : All others	70°C $\pm$ 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	$\pm 1\%$	$\pm 0.5\%$	R $\leq$ 150m Ω : 1H R $\leq$ 100m Ω : All others	R $\leq$ 100m Ω : 1H R $\leq$ 50m Ω : All others	+125°C, 1000 hours: 1F; +155°C, 1000 hours: 1H, 1E, 1J, 2A, 2B, 2E, W2H, W3A
Sulfuration Test	$\pm 5\%$	—	R $\leq$ 150m Ω : 1H R $\leq$ 100m Ω : All others	—	Soaked in industrial oil with 3.5% sulfur concentration 105°C $\pm$ 3°C, 500 hours