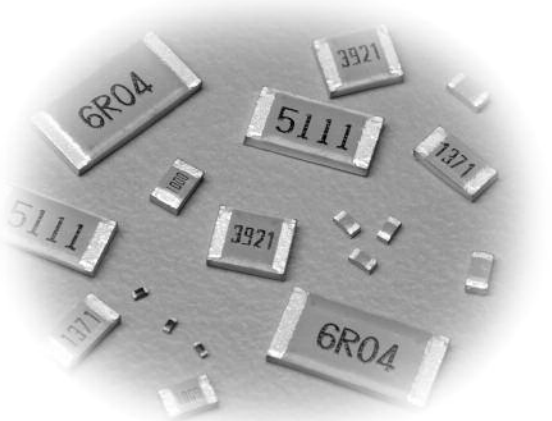
KOA SPEER ELECTRONICS, INC.

RK73H

precision 0.5%, 1% tolerance thick film chip resistor

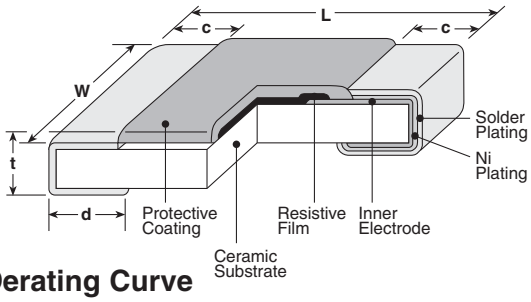
EU RoHS COMPLIANT



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: 0402 (1E), 0603 (1J), 0805 (2A), 1206 (2B), 1210 (2E), 2010 (2H/W2H), 2512 (3A/W3A)

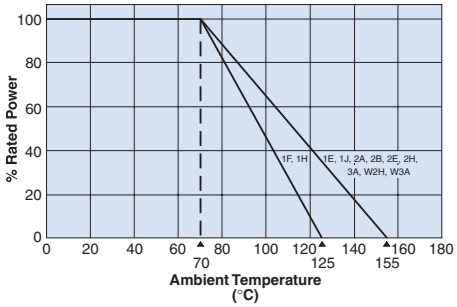
dimensions and construction



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 (0.11±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 +.004 -.002 (1.0 +0.1 -0.05)	.02±.002 (0.5±0.05)	.008±.004 (0.2±0.1)	.01 +.002 -.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 +.008 -.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 +.008 -.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 +.008 -.004 (0.4 +0.2 -0.1)	
W3A (2512)				.026±.006 (0.65±0.15)	

* 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.

ordering information

New Part #

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	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)	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 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.

12/04/12

applications and ratings

Part Designation	Power Rating @ 70°C	T.C.R. (ppm/°C) Max.	Resistance Range E-24, E-96 (D±0.5%)	Resistance Range E-24, E-96 (F±1%)	Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Operating Temperature Range
RK73H1F (01005)	1/32W (.03W)	±250	—	6.8KΩ - 1MΩ[1]	15V	30V	-55°C to +125°C
		±300	—	10Ω - 6.2KΩ[1]			
RK73H1H (0201)	1/20W (.05W)	±200	10Ω - 1MΩ	10Ω - 10MΩ[1]	25V	50V	
		±400	—	1.0Ω - 9.1Ω[1]			
RK73H1E (0402)	1/16W (.063W)	±100	10Ω - 1MΩ	10Ω - 1MΩ	50V	100V	-55°C to +155°C
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 10MΩ			
RK73H1J (0603)	1/10W (.10W)	±100	10Ω - 1MΩ	10Ω - 1MΩ			
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 10MΩ			
RK73H2A (0805)	1/8W (.125W)	±100	10Ω - 1MΩ	10Ω - 1MΩ	150V	200V	
		±200	—	1.0Ω - 9.76Ω			
		±400	—	1.02MΩ - 10MΩ			
RK73H2B (1206)	1/4W (.25W)	±100	10Ω - 1MΩ	10Ω - 1MΩ	200V	400V	
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ			
		±400	—	5.62MΩ - 10MΩ			
RK73H2E (1210)	1/2W (.50W)	±100	10Ω - 1KΩ	10Ω - 1KΩ			
	1/3W (.33W)		1.02KΩ - 1MΩ	1.02KΩ - 1MΩ			
	1/2W (.50W)	±200	—	1.0Ω - 9.76Ω			
	1/3W (.33W)	±200	—	1.02MΩ - 5.6MΩ			
	1/3W (.33W)	±400	—	5.62MΩ - 10MΩ			
RK73HW2H/2H (2010)	3/4W (.75W)	±100	10Ω - 1MΩ	10Ω - 1MΩ			
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ			
		±400	—	5.62MΩ - 10MΩ			
RK73HW3A/3A (2512)	1W	±100	10Ω - 1MΩ	10Ω - 1MΩ	200V (500V*)	400V (500V*)	
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ			
		±400	—	5.62MΩ - 10MΩ			

* Please contact KOA Speer for the Max. working voltage and the Max. overload voltage.
[1] 1F: 10~1MΩ: E-24. 1H: 1.0~9.1, 1M~10MΩ: E-24.

environmental applications

Performance Characteristics

Parameter	Requirement Δ R (%+0.1Ω) Limit	Typical	Test Method
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%: 1F ~ W3A (R<10Ω, R>1MΩ)	±0.5%: 1F ~ W3A (10Ω<R<1MΩ); ±1%: 1F ~ 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, 1H +155°C, 1000 hours: 1E, 1J, 2A, 2B, 2E, W2H, W3A

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6/27/13