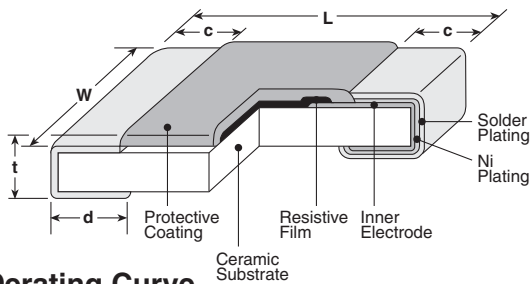


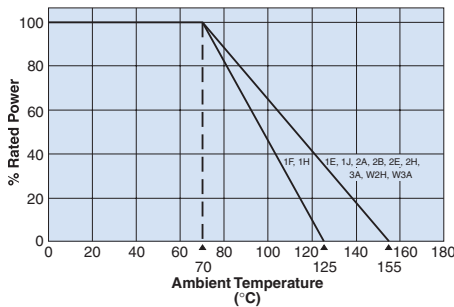
### features

- Marking: 1F, 1H, 1E no marking, black body.  
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.

### dimensions and construction



### Derating Curve



Type* (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
<b>1F</b> (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)
<b>1H</b> (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)
<b>1E</b> (0402)	.039 <sup>+0.04</sup> <sub>-.002</sub> (1.0 <sup>+0.1</sup> <sub>-.05</sub> )	.02±.002 (0.5±0.05)	.008±.004 (0.2±0.1)	.01 <sup>+0.02</sup> <sub>-.004</sub> (0.25 <sup>+0.05</sup> <sub>-.01</sub> )	.014±.002 (0.35±0.05)
<b>1J</b> (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)
<b>2A</b> (0805)	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.016±.008 (0.4±0.2)	.012 <sup>+0.008</sup> <sub>-.004</sub> (0.3 <sup>+0.2</sup> <sub>-.01</sub> )	.02±.004 (0.5±0.1)
<b>2B</b> (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.012 (0.5±0.3)	.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-.01</sub> )	.024±.004 (0.6±0.1)
<b>2E</b> (1210)		.102±.008 (2.6±0.2)			
<b>2H</b> (2010)	.197±.008 (5.0±0.2)	.098±.008 (2.5±0.2)	.02±.012 (0.5±0.3)	.026±.006 (0.65±0.15)	.024±.004 (0.6±0.1)
<b>W2H</b> (2010)					
<b>3A</b> (2512)	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)		.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-.01</sub> )	
<b>W3A</b> (2512)				.026±.006 (0.65±0.15)	

\* 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 W2H W3A				
Termination Material			T: Sn (1F ~ 3A) Contact factory for below options: L: SnPb (1E ~ 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 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%

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

4/27/11

## 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 <sup>1</sup>	15V	30V	-55°C to +125°C	
		±300	—	10Ω - 6.2KΩ <sup>1</sup>				
RK73H1H (0201)	1/20W (.05W)	±200	10Ω - 1MΩ	10Ω - 10MΩ	25V	50V		
		±400	—	1.0Ω - 9.1Ω <sup>1</sup>				
RK73H1E (0402)	1/16W (.063W)	±100	10Ω - 1MΩ	10Ω - 1MΩ	50V	100V		
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 10MΩ				
RK73H1J (0603)	1/10W (.10W)	±100	10Ω - 1MΩ	10Ω - 1MΩ			150V	200V
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 10MΩ				
		±400	—	1.0Ω - 9.76Ω 1.02MΩ - 10MΩ				
RK73H2A (0805)	1/8W (.125W)	±100	10Ω - 1MΩ	10Ω - 1MΩ			200V	400V
		±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				
RK73HW2H/2H (2010)	3/4W (.75W)	±100	10Ω - 1MΩ	10Ω - 1MΩ	200V (500V*)	400V (500V*)		
		±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.

<sup>1</sup> 1H and 1F (1.0~9.1Ω, 1M~10MΩ) E-24 values only.

## environmental applications

### Performance Characteristics

Parameter	Requirement Δ R (%+0.05Ω)		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%: 1E ~ W3A (R < 10Ω, R > 1MΩ)	±0.75%: 1F, 1H (10Ω < R < 1MΩ); ±1%: 1E ~ W3A (R < 10Ω, R > 1MΩ); ±0.5%: Another	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