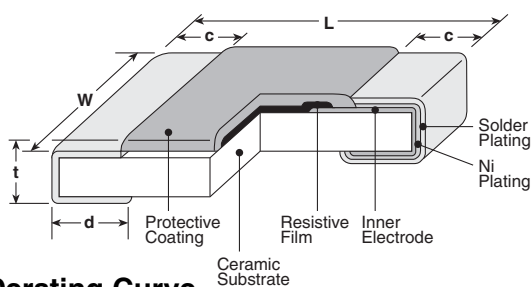


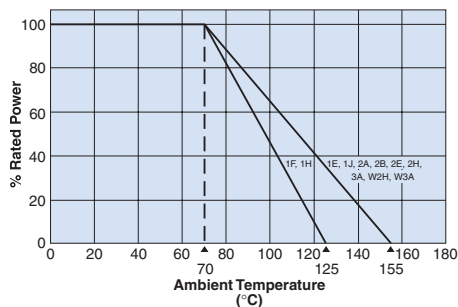
features

- RuO₂ thick film resistor element
- Meets or exceeds EIA 575, EIAJ RC 2690A, EIA PDP-100, MIL-R-55342F
- Marking: Four-digit black on blue protective coat on 1J – 3A sizes. No marking on 1E size
Black body and no marking on 1F, 1H size
Three-digit on 1J size, E-24 values only
- Products with lead-free terminations meet EU RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC

dimensions and construction



Derating Curve



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
NEW 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 ^{+0.004} _{-.002} (1.0 ^{+0.1} _{-0.05})	.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)			
2H (2010)	.197±.008 (5.0±0.2)	.098±.008 (2.5±0.2)			
W2H (2010)					
3A (2512)	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)		.016 ^{+0.008} _{-.004} (0.4 ^{+0.2} _{-.01})	
W3A (2512)				.026±.006 (0.65±0.15)	

ordering information

New Part #	RK73H	2B	T	TD	1003	F
Type						
Size		NEW 1F 1H 1E 1J 2A 2B 2E 2H 3A W2H W3A	Termination Material T: Sn (1F, 1H, 1E, 1J, 2A, 2B, 2E, 2H, 3A) L: SnPb (1E, 1J, 2A, 2B, 2E, 2H, 3A) G: Au (1E, 1J, 2A: 10Ω ~ 1MΩ - Contact factory)	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 punched 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" punched plastic TED: 0805, 1206, 1210, 2010 & 2512: 10" punched 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.

11/05/09

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
NEW RK73H1F (01005)	1/3W (.03W)	±250	—	6.8kΩ - 1MΩ ¹	15V	30V	-55°C to +155°C
		±300	—	10Ω - 6.2KΩ ¹			
RK73H1H (0201)	1/20W (.05W)	±200	10Ω - 1MΩ	10Ω - 10MΩ	25V	50V	-55°C to +125°C
		±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	150V	200V	-55°C to +155°C
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 10MΩ			
RK73H2A (0805)	1/8W (.125W)	±100	10Ω - 1MΩ	10Ω - 1MΩ	200V	400V	-55°C to +155°C
		±200	—	1.0Ω - 9.76Ω			
		±400	—	1.02MΩ - 10MΩ			
RK73H2B (1206)	1/4W (.25W)	±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			
RK73H2E (1210)	1/2W (.50W)	±100	10Ω - 1KΩ	10Ω - 1KΩ	200V	400V	-55°C to +155°C
	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			
RK73H2H/W2H (2010)	3/4W (.75W)	±100	10Ω - 1MΩ	10Ω - 1MΩ	200V (500V ^{**})	400V (500V ^{**})	-55°C to +155°C
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ			
		±400	—	5.62MΩ - 10MΩ			
RK73H3A/W3A (2512)	1W	±100	10Ω - 1MΩ	10Ω - 1MΩ	200V (500V ^{**})	400V (500V ^{**})	-55°C to +155°C
		±200	—	1.0Ω - 9.76Ω 1.02MΩ - 5.6MΩ			
		±400	—	5.62MΩ - 10MΩ			

* Parenthesis indicate EIA package size codes.

¹ 1F(10~1MΩ) and 1H (1.0~9.1Ω, ±1%)E-24 values only.

** Please contact KOA Speer for the Max. working voltage and the Max. overload voltage.

environmental applications

Performance Characteristics

Parameter	Requirement Δ R		Test Method
	Limit	Typical	
Resistance	Within regulated 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 only ±0.5% all others	Rated Voltage x 2.5 for 5 seconds (2B: Rated Voltage x 2 for 5 seconds)
Resistance to Solder Heat	±1%, ±3%*	±0.75%, ±1%, ±0.5%**	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±0.5%	±0.5%: 1F only ±0.3% all others	-55°C (30 minutes), +125°C (30 minutes), 100 cycles
Moisture Resistance	±2%: 1J, 2A, 2B ±3%: all others	±0.75%: 1J, 2A, 2B; ±1.5%: 1F, ±1%: all others	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%: all others	±0.75%: 1J, 2A, 2B ±1.5%: 1F, ±1%: all others	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.5%: 1F only ±0.3%: all others	+125°C, 1000 hours: 1F, 1H +155°C, 1000 hours: 1E, 1J, 2A, 2B, 2E, W2H, W3A

* ±1%: 1H, 1E~W3A (10Ω≤R≤1MΩ); ±3%: 1E~W3A (R<10Ω, R>1MΩ)

** ±0.75%: 1H; ±1%: 1E ~W3A (R<10Ω, R>1MΩ); ±0.5%: all others

For Surface Temperature Rise Graph see Environmental Applications. Additional environmental applications can also be found at www.koaspeer.com
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

11/10/09