

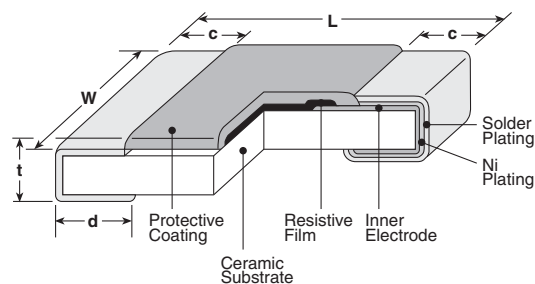
## thick film 0.5%, 1% tolerance, 50ppm/°C chip resistor



### features

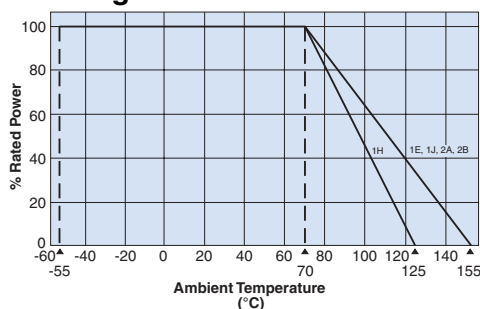
- High precision resistor with T.C.R. of  $\pm 50$  ppm/°C and tolerance of  $\pm 0.5\%$  or  $\pm 1\%$
- Marking: 1H, 1E: no marking on black protective coating  
1J: no marking for E-96, white 3-digits for E-24, on dark blue protective coating  
2A, 2B: white 4-digit on dark blue protective coating
- 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: 0402 (1E), 0603 (1J), 0805 (2A), 1206 (2B)

### dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
<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±.012 (0.23±0.03)
<b>1E</b> (0402)	.039 <sup>+0.004</sup> <sub>-.002</sub> (1.0 <sup>+0.1</sup> <sub>-0.05</sub> )	.02±.002 (0.5±0.05)	.008±.004 (0.2±0.1)	.01 <sup>+0.002</sup> <sub>-.004</sub> (0.25 <sup>+0.05</sup> <sub>-0.1</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>-0.1</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>-0.1</sub> )	.024±.004 (0.6±0.1)

### 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 #	RK73G	1J	T	TD	1003	F
Type						
Size		1H 1E 1J 2A 2B	Termination Material T: Sn (1H, 1E, 1J, 2A, 2B) L: SnPb (1E, 1J, 2A, 2B)	Packaging 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: 7" 4mm pitch punched paper TDD: 0603, 0805, 1206: 10" paper tape TE: 0805, 1206: 7" embossed plastic TED: 0805, 1206: 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: $\pm 0.5\%$ F: $\pm 1\%$

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

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## 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
RK73G1H (0201)	1/20W (.05W)	±50	100Ω - 1MΩ**	100Ω - 1MΩ**	25V	50V	-55°C to +125°C
RK73G1E (0402)	1/16W (.063W)		10Ω - 1MΩ	10Ω - 1MΩ	50V	100V	-55°C to +155°C
RK73G1J (0603)	1/10W (.10W)		10Ω - 1MΩ		75V	150V	
RK73G2A (0805)	1/8W (.125W)				150V	200V	
RK73G2B (1206)	1/4W (.25W)				200V	400V	

\* Parentheses indicate EIA package size codes.

\*\* RK73G1H available in E-24 decade values only

## environmental applications

### Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.05\Omega)$		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	1H: +25°C/+125°C, 1E, 1J, 2A, 2B: +25°C/-55°C and +25°C/+125°C
Overload (Short time)	±2%	±0.6%	Rated Voltage x 2.5 for 5 seconds (2B: Rated Voltage x 2 for 5 seconds)
Resistance to Solder Heat	±1%	±1%: 1H, ±0.4%: 1E, 1J, 2A, 2B	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±0.5%	±0.3%	-55°C (30 minutes), +125°C (30 minutes), 100 cycles
Moisture Resistance	±2%: 1J, 2A, 2B ±3%: 1H, 1E	±0.6%: 1J, 2A, 2B; ±1%: 1H, 1E	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%: 1H, 1E	±0.6%: 1J, 2A, 2B; ±1%: 1H, 1E	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.6%	+125°C, 1000 hours: 1H +155°C, 1000 hours: 1E, 1J, 2A, 2B

For Surface Temperature Rise Graph see Environmental Applications. Additional environmental applications can also be found at [www.koaspeer.com](http://www.koaspeer.com)

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