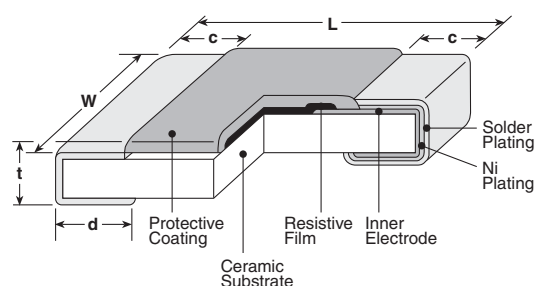




## features

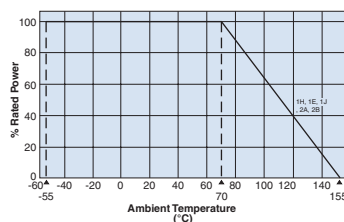
- High precision resistor with T.C.R. of  $\pm 50$  ppm/°C and tolerance of  $\pm 0.25\%$ ,  $\pm 0.5\%$  or  $\pm 1\%$
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified

## dimensions and construction

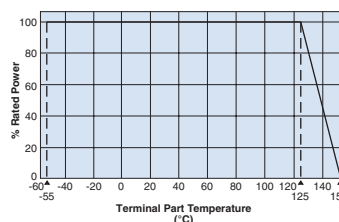


Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
<b>1H</b> (0201)	.024 $\pm$ .001 (0.6 $\pm$ 0.03)	.012 $\pm$ .001 (0.3 $\pm$ 0.03)	.004 $\pm$ .002 (0.1 $\pm$ 0.05)	.006 $\pm$ .002 (0.15 $\pm$ 0.05)	.009 $\pm$ .001 (0.23 $\pm$ 0.03)
<b>1E</b> (0402)	.039 $\pm$ .004 (1.0 $\pm$ 0.1) -0.05	.02 $\pm$ .002 (0.5 $\pm$ 0.05)	.008 $\pm$ .004 (0.2 $\pm$ 0.1)	.01 $\pm$ .002 (0.25 $\pm$ 0.05) -0.1	.014 $\pm$ .002 (0.35 $\pm$ 0.05)
<b>1J</b> (0603)	.063 $\pm$ .008 (1.6 $\pm$ 0.2)	.031 $\pm$ .004 (0.8 $\pm$ 0.1)	.012 $\pm$ .004 (0.3 $\pm$ 0.1)	.012 $\pm$ .004 (0.3 $\pm$ 0.1)	.018 $\pm$ .004 (0.45 $\pm$ 0.1)
<b>2A</b> (0805)	.079 $\pm$ .008 (2.0 $\pm$ 0.2)	.049 $\pm$ .004 (1.25 $\pm$ 0.1)	.016 $\pm$ .008 (0.4 $\pm$ 0.2)	.012 $\pm$ .008 (0.3 $\pm$ 0.2) -0.1	.02 $\pm$ .004 (0.5 $\pm$ 0.1)
<b>2B</b> (1206)	.126 $\pm$ .008 (3.2 $\pm$ 0.2)	.063 $\pm$ .008 (1.6 $\pm$ 0.2)	.02 $\pm$ .012 (0.5 $\pm$ 0.3)	.016 $\pm$ .008 (0.4 $\pm$ 0.2) -0.1	.024 $\pm$ .004 (0.6 $\pm$ 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.



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" in the beginning of our catalog before use.

## ordering information

RK73G	1J	T	TD	1003	F
Type	Size	Termination Material	Packaging	Nominal Resistance	Tolerance
	1H 1E 1J 2A 2B	T: Sn (1H, 1E, 1J, 2A, 2B) L: SnPb (1E, 1J, 2A, 2B)	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 TE: 0805, 1206: 7" embossed plastic For further information on packaging, please refer to Appendix A	3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω	<b>New C:</b> $\pm 0.25\%$ <b>D:</b> $\pm 0.5\%$ <b>F:</b> $\pm 1\%$

## applications and ratings

Part Designation*	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (ppm/°C) Max.	Resistance Range			Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage
					New E-24, E-96 (C±0.25%)	E-24, E-96 (D±0.5%)	E-24, E-96 (F±1%)		
RK73G1H (0201)	1/20W (.05W)	70°C	125°C	±50	—	100Ω - 1MΩ**	100Ω - 1MΩ**	25V	50V
RK73G1E (0402)	1/10W (.10W)				100Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ	50V	100V
RK73G1J (0603)	1/10W (.10W)							75V	150V
RK73G2A (0805)	1/8W (.125W)							150V	200V
RK73G2B (1206)	1/4W (.25W)							200V	400V

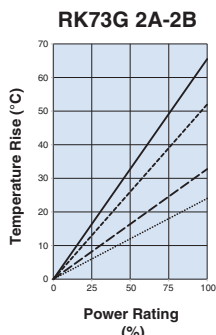
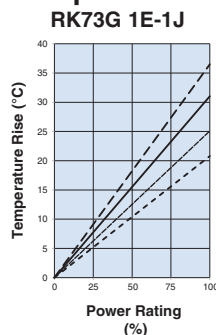
Operating Temperature Range: -55°C ~ +155°C

\* Parentheses indicate EIA package size codes.

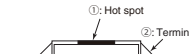
\*\* RK73G1H available in E-24 decade values only

## environmental applications

### Temperature Rise

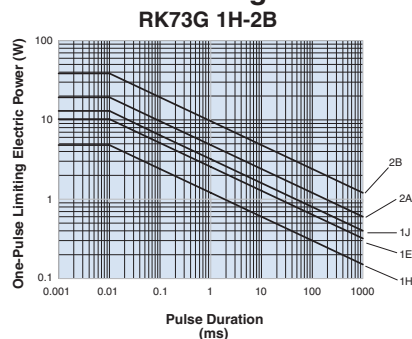


Measurement condition  
Room temperature: 25°C  
PCB: FR-4t = 1.6mm  
Cu foil thickness: 35μm



Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

### One-Pulse Limiting Electric Power



The maximum applicable voltage is equal to the max. overload voltage. Please ask us about the resistance characteristic of continuous applied pulse. The pulse endurance values are not assured values, so be sure to check the products on actual equipment when you use them.

## Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.1\Omega)$		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 (1E, 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%	+155°C, 1000 hours

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

6/20/20