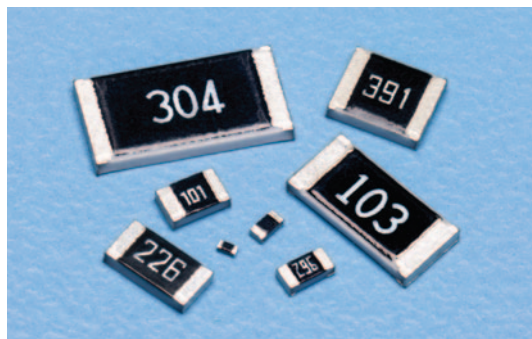
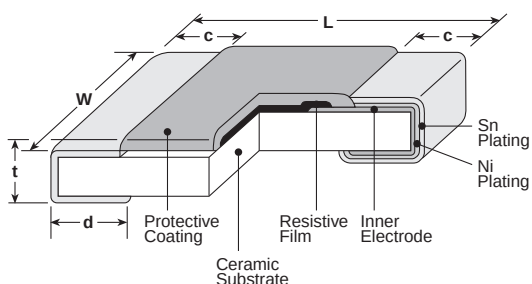




features

- Using special protective film material prevents sulfuration disconnection of the inner top electrode (RK73-KT)
- Excellent heat resistance and weather resistance are ensured by the use of metal glaze thick film
- High stability and high reliability with the triple-layer structure of electrode
- Suitable for both flow and reflow
- 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



NEW>

Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
1E KT (0402)	.039 ^{+0.004} / _{-.002} (1.0 ^{+0.1} / _{-.05})	0.02±.002 (0.5±0.05)	.007±.004 (0.2±0.1)	.006 ^{+0.007} / _{-.004} (0.15 ^{+0.2} / _{-.1})	.014±.002 (0.35±0.05)

ordering information

RK73H	1E	R	T	TD	1002	F
Type	Power Rating	Characteristic	Termination Material	Packaging	Nominal Resistance	Resistance Tolerance
RK73B RK73H RK73Z	1E	NEW K: Sulfur resistant (general purpose)	T: Sn	TPL - TP: 2mm pitch punch paper For further information on packaging, please refer to Appendix A	RK73B: 3 digits RK73H: 4 digits RK73Z: None	D: ±0.5% F: ±1% J: ±5%

applications and ratings

RK73B/RK73H

Part Designation	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (ppm/°C) Max.	Resistance Range				Maximum Working Voltage	Maximum Overload Voltage	Operating Temp. Range
					RK73H		RK73B				
					D±0.5% E24, E96	F±1% E24, E96	G±2% E24	J±5% E24			
1E KT (0402)	0.1W	70°C	125°C	±100	10-1MΩ	10-1MΩ	—	—	75V	100V	-55°C to +155°C
				±200	—	1- 9.75Ω	—	1-1MΩ			

Rated voltage = $\sqrt{\text{Power rating} \times \text{resistance value}}$ or max. working voltage, whichever is lower.

If any questions arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature," in your usage conditions, please give priority to the "Rated Terminal Part Temperature."

While using under high power, the temperature of the product may increase depending on the condition of heat dissipation from PCB.

Be sure to check the terminal part temperature as well as precautions to use on delivery specification before use.

For more details on derating click here ["Derating Curves – Caution & Terms."](#)

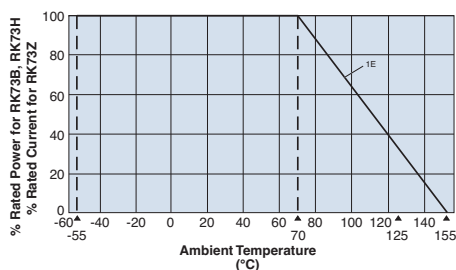
RK73Z

Part Designation	Rated Ambient Temperature	Rated Terminal Part Temperature	Resistance	Current Rating	Maximum Surge Current	Operating Temperature Range
NEW> 1E KT (0402)	+70°C	+125°C	50mΩ max.	1A	2A	-55°C to +155°C

environmental applications

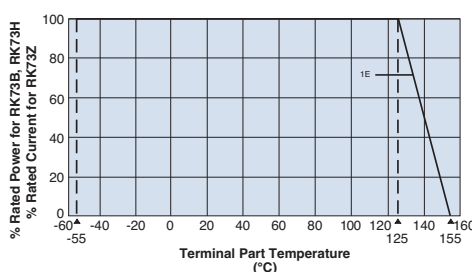
Derating Curve

RK73B-RK73H-RK73Z-KT
Ambient Temperature



For resistors operated at an ambient temperature of 70°C or higher, the power (for RK73B, RK73H) or a current rating (for RK73Z) shall be derated in accordance with the above derating curve.

RK73B-RK73H-RK73Z-KT
Terminal Part Temperature

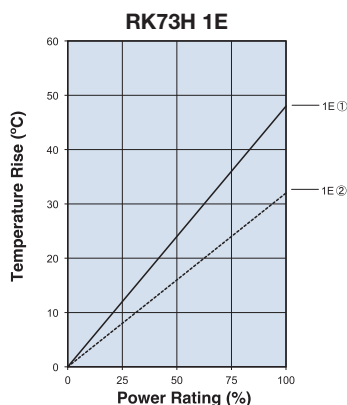
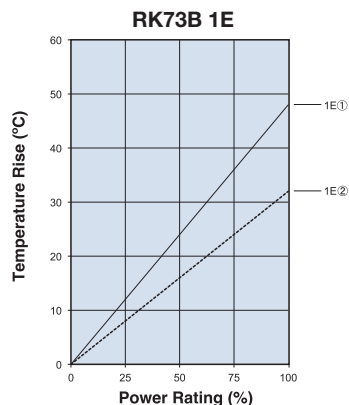


When the terminal part temperature of the resistor exceeds the rated terminal part temperature shown above, the power shall be derated according to the derating curve.

For more details on derating click here ["Derating Curves – Caution & Terms."](#)

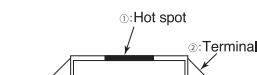
environmental applications (continued)

Temperature Rise

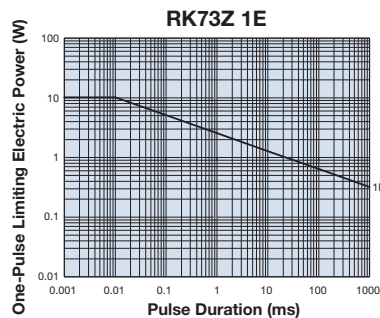
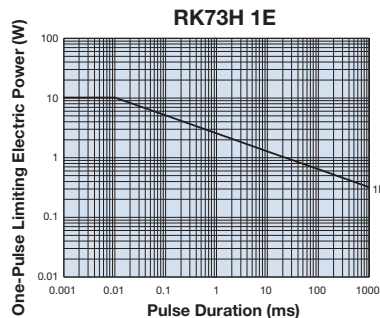
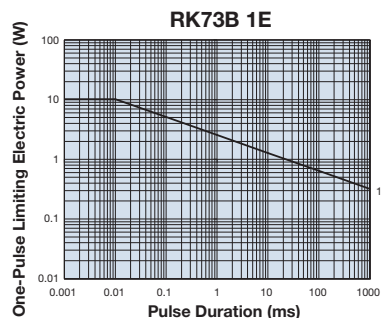


Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

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



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.

Please ask us about the resistance characteristic of continuous applied pulse. Please calculate One-Pulse Limiting Electric Power using upper limit of resistance (50mΩ or 100mΩ) for applied current. 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	RK73H, RK73B Requirement ΔR $\pm(\%+0.1\Omega)$		RK73Z Requirement		Test Method
	Limit	Typical	Limit	Typical	
Resistance	Within specified tolerance	—	$R \leq 50m\Omega$	$R \leq 40m\Omega$	25°C
T.C.R.	Within specified T.C.R.	—	—	—	+25°C/-55°C and +25°C/+125°C
Overload (Short time)	$\pm 2\%$	$\pm 0.8\%$	$R \leq 50m\Omega$	$R \leq 40m\Omega$	Rated Voltage x 2 for 5 seconds
Resistance to Solder Heat	$\pm 1\%: 10\Omega \leq R \leq 1M\Omega$ $\pm 3\%: R < 10\Omega, R > 1M\Omega$	$\pm 0.5\%$	$R \leq 50m\Omega$	$R \leq 40m\Omega$	260°C $\pm 5^\circ\text{C}$, 10 seconds ± 1 second
Rapid Change of Temperature	$\pm 0.5\%$	$\pm 0.3\%$	$R \leq 50m\Omega$	$R \leq 40m\Omega$	-55°C (30 minutes) / +125°C (30 minutes) 100 cycles
Moisture Resistance	$\pm 3\%$	$\pm 1\%$	$R \leq 100m\Omega$	$R \leq 50m\Omega$	40°C $\pm 2^\circ\text{C}$, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	$\pm 3\%$	$\pm 1\%$	$R \leq 100m\Omega$	$R \leq 50m\Omega$	70°C $\pm 2^\circ\text{C}$ or rated terminal part temperature $\pm 2^\circ\text{C}$ 1000h, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	$\pm 1\%$	$\pm 0.5\%$	$R \leq 100m\Omega$	$R \leq 50m\Omega$	$\pm 155^\circ\text{C}$, 1000 hours
Sulfuration Test	$\pm 5\%$	$\pm 0.2\%$	$R \leq 100m\Omega$	$R \leq 50m\Omega$	ASTM-B809-95, 105°C $\pm 2^\circ\text{C}$, 750h/EIA-977, 105°C $\pm 2^\circ\text{C}$ 750h