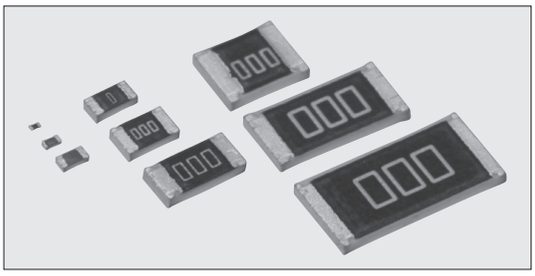
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JUMPER

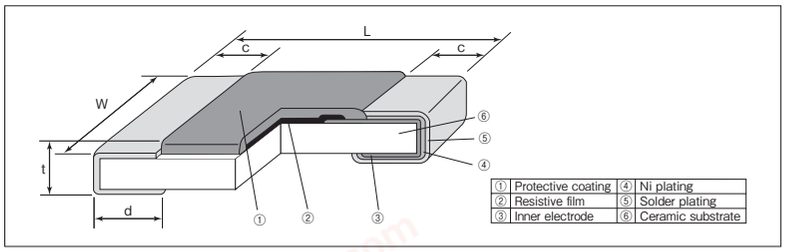
EU RoHS

RK73Z Flat Chip Jumper Resistors



Coating color : Green (1H, 1E)
Black (1F, 1J, 2A, 2B, 2E, W2H, W3A)

■Construction



①	Protective coating	④	Ni plating
②	Resistive film	⑤	Solder plating
③	Inner electrode	⑥	Ceramic substrate

■Features

- Wide lineup from 01005 to 2512 size.
- Excellent heat resistance and weather resistance, because of the use of glaze thick film as resistive film.
- Suitable for both flow and reflow solderings.
- Products with lead free termination meet EU-RoHS requirements. EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Tested (Exemption 1F).

■Reference Standards

IEC 60115-8
JIS C 5201-8
EIAJ RC-2134C

■Dimensions

Type (Inch Size Code)	Dimensions (mm)					Weight (g) (1000pcs)
	L	W	c	d	t	
1F (01005)	0.4±0.02	0.2±0.02	0.10±0.03	0.11±0.03	0.13±0.02	0.04
1H (0201)	0.6±0.03	0.3±0.03	0.1±0.05	0.15±0.05	0.23±0.03	0.14
1E (0402)	$1.0^{+0.1}_{-0.05}$	0.5±0.05	0.2±0.1	$0.25^{+0.05}_{-0.1}$	0.35±0.05	0.68
1E AT (0402)			0.25±0.1	0.3±0.15		
1J (0603)	1.6±0.2	0.8±0.1	0.3±0.1	0.3±0.1	0.45±0.1	2.14
1J AT (0603)			0.35±0.15	0.5±0.2		
2A (0805)	2.0±0.2	1.25±0.1	0.4±0.2	$0.3^{+0.2}_{-0.1}$	0.5±0.1	4.54
2A AT (0805)			0.45±0.25	0.6±0.2	0.55±0.1	
2B (1206)	3.2±0.2	1.6±0.2	0.5±0.3	$0.4^{+0.2}_{-0.1}$	0.6±0.1	9.14
2B AT (1206)			0.55±0.35	0.8±0.2		
2E (1210)		2.6±0.2	0.5±0.3	$0.4^{+0.2}_{-0.1}$		15.5
W2H※1 (2010)	5.0±0.2	2.5±0.2		0.65±0.15		24.3
W3A※1 (2512)	6.3±0.2	3.1±0.2				37.1

※1 RK73Z 2H and RK73Z 3A are also still available (different "d" dimensions=$0.4^{+0.2}_{-0.1}$mm)

■Type Designation

Example

RK73Z	2B		T	TD
Product Code	Current Rating	Characteristic	Terminal Surface Material	Taping
	1F : 0.5A 1H : 0.5A 1E : 1A 1J : 1A 2A : 2A 2B : 2A 2E : 2A W2H : 2A W3A : 2A	Nil : Standard A : Heat shock resistance※2	T : Sn G : Au※3 (L : Sn/Pb※4)	TX : 4mm width-1mm pitch plastic embossed TBL・TCM : 2mm pitch press paper TPL・TP : 2mm pitch punch paper TD : 4mm pitch punch paper TE : 4mm pitch plastic embossed BK : Bulk

※2 With type A (1E,1J,2A,2B) only T is available as the terminal surface material. No resistance marking.
※3 Products with gold plated electrodes are also available with 1E, 1J and 2A types, so please consult with us.
※4 With type 1F and 1H, W2H, W3A only T is available as the terminal surface material.
The terminal surface material lead free is standard.
Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.
For further information on taping, please refer to APPENDIX C on the back pages.

■Ratings

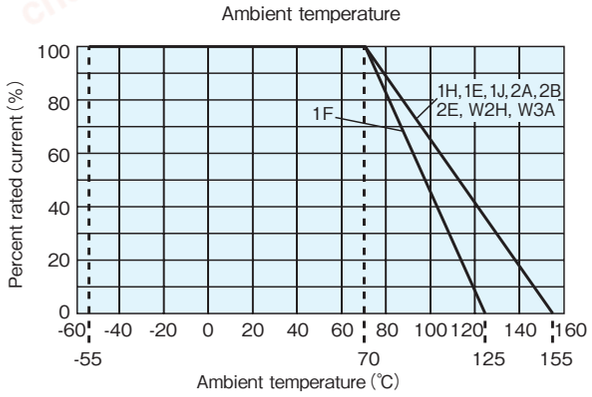
Type	Rated Ambient Temp.	Rated Terminal Part Temp.	Resistance	Current Rating	Max. Overload Current	Operating Temp. Range	Packaging & Q'ty /Reel (pcs)					
							TX	TBL	TCM※6	TPL・TP	TD	TE
1F	70℃	—	50mΩ max.	0.5A	1A	−55℃~+125℃	40,000	20,000	—	—	—	—
1H		125℃					—	—	15,000	—	—	—
1E	70℃	125℃	50mΩ max.	1A	2A		—	—	—	TPL:20,000 TP :10,000	—	—
1J							—	—	—	TP :10,000※5	5,000	—
2A	70℃	125℃	50mΩ max.	2A	5A	−55℃~+155℃	—	—	—	TP :10,000※5	5,000	4,000※5
2B					10A		—	—	—	—	5,000	4,000※5
2E							—	—	—	—	5,000	4,000※5
W2H							—	—	—	—	—	4,000
W3A							—	—	—	—	—	4,000

※5 Standard packaging : TD(4mm pitch punch paper)
※6 Standard taping specification of 1H is TCM. Previously available "TC(10,000pcs/Reel)" is not recommended for new designs.
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".
For more details, please refer tovIntroduction of the derating curves based on the terminal part temperature" on the beginning of our catalog.

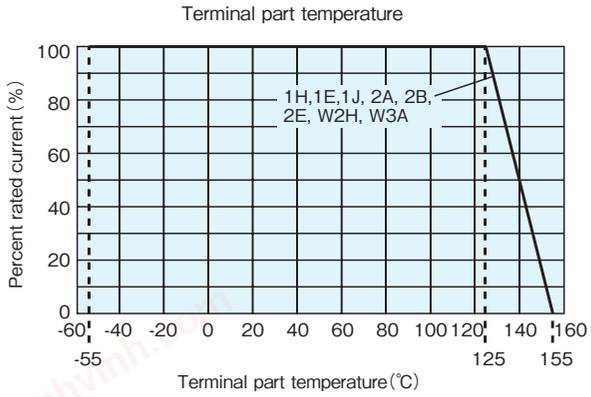
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.
Contact our sales representatives before you use our products for applications including automotives, medical equipment and aerospace equipment.
Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

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■Derating Curve

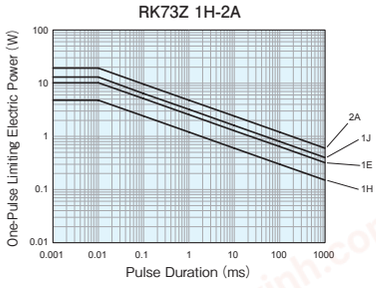


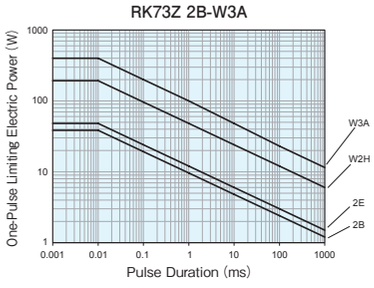
For resistors operated at an ambient temperature of 70℃ or higher, the current shall be derated in accordance with the above derating curve.



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.
※Please refer to "Introduction of the derating curves based on the terminal part temperature" on the beginning of our catalog before use.

■One-Pulse Limiting Electric Power





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

Test Items	Performance Requirements		Test Methods
	Limit	Typical	
Resistance	50mΩ Max. after the test	15mΩ Max. after the test	25℃
Overload (Short time)	50mΩ Max. after the test	18mΩ Max. after the test	Max. overload current, 5s, 1 cycle
Resistance to soldering heat	50mΩ Max. after the test	15mΩ Max. after the test	260℃±5℃, 10s±1s
Rapid change of temperature	50mΩ Max. after the test	15mΩ Max. after the test	Characteristic「Nil」(Standard) : −55℃ (30min.)/+125℃ (30min.) 100 cycles Characteristic「A」(Heat shock resistance) : −55℃ (30min.)/+125℃ (30min.) 1000 cycles
Moisture resistance	100mΩ Max. after the test	18mΩ Max. after the test	40℃±2℃, 90%～95%RH, 1000h 1.5h ON/0.5h OFF cycle
Endurance at 70℃ or rated terminal part temperature	100mΩ Max. after the test	18mΩ Max. after the test	70℃±2℃ or rated terminal part temperature ±2℃ 1000h 1.5h ON/0.5h OFF cycle
High temperature exposure	100mΩ Max. after the test	15mΩ Max. after the test	+125℃, 1000h : 1F +155℃, 1000h : 1H, 1E, 1J, 2A, 2B, 2E, W2H, W3A

■Precautions for Use

- The substrate of chip resistors is alumina. Cracks may occur at the connection of solder (solder fillet portion) due to the difference of the coefficient of thermal expansion from a mounting board when heat stress like heat cycle, etc. are repeatedly given to them. Care should be taken to the occurrence of the cracks when the change in ambient temperature or ON/OFF of load is repeated, especially when large types of W2H/W3A which have large thermal expansion and also self heating. By general temperature cycle test using glass-epoxy (FR-4) boards under the maximum/minimum temperatures of operating temperature range, the crack does not occur easily in the types of 1F～2E, but the crack tends to occur in the types of W2H/W3A. The occurrence of the crack by heat stress may be influenced by the size of a pad, solder volume, heat radiation of mounting board etc., so please pay careful attention to designing when a big change in ambient temperature and conditions for use like ON/OFF of load can be assumed.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.
Contact our sales representatives before you use our products for applications including automotives, medical equipment and aerospace equipment.
Malfunction or failure of the products in such applications may cause loss of human life or serious damage.