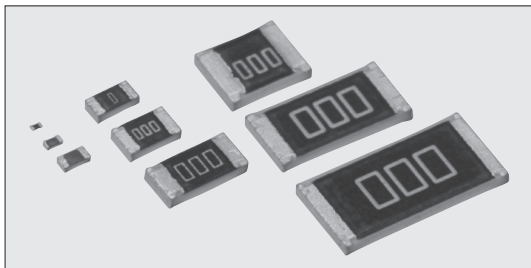


RK73Z Flat Chip Jumper Resistors



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

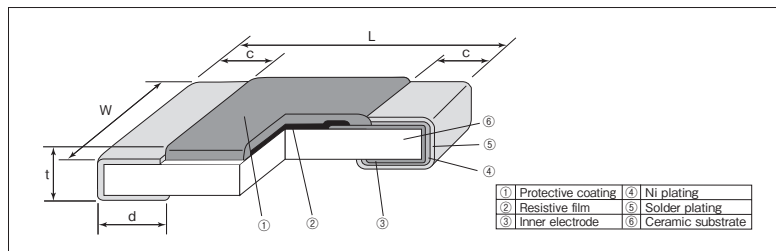
Features

- Small and light weight.
- Excellent heat resistance and weather resistance, because of the use of glaze thick film as resistive film.
- High stability and high reliability because of the triple-layer structure of electrode.
- Applicable to various kinds of automatic mounters for taping, etc.
- 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 qualified (Exemption 1F).

Reference Standards

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

Construction



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	
1J (0603)	1.6±0.2	0.8±0.1	0.3±0.1	0.3±0.1	0.45±0.1	2.14	
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	
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	
2E (1210)		2.6±0.2				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	Terminal Surface Material	Taping
	1F:0.5A 1H:0.5A 1E:1A 1J:1A 2A:2A 2B:2A 2E:2A W2H:2A W3A:2A	T:Sn G:Au ^{※2} (L:Sn/Pb ^{※3})	TX : 4mm width-1mm pitch plastic embossed TBL・TC・TCM : 2mm pitch press paper TPL・TP : 2mm pitch punch paper TD : 4mm pitch punch paper TE : 4mm pitch plastic embossed BK : Bulk

※2 Products with gold plated electrodes are also available with 1E, 1J and 2A type, so please consult with us.

※3 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.

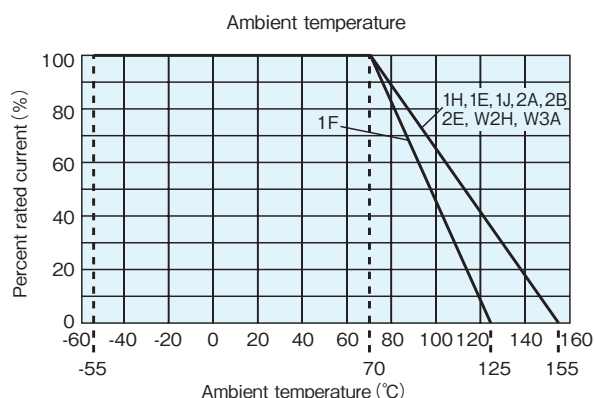
Ratings

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

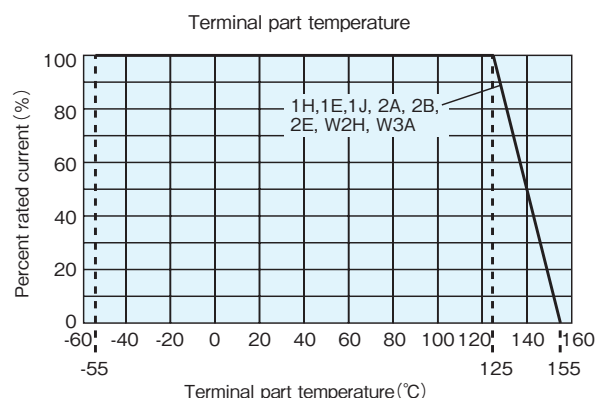
※4 Standard packaging : TD(4mm pitch punch paper)

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 to Introduction of the derating curves based on the terminal part temperature" on the beginning of our catalog.

Derating Curve



For resistors operated at an ambient temperature of 70°C 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.

Performance

Test Items	Performance Requirements		Test Methods
	Limit	Typical	
Resistance	50mΩ Max. after the test	15mΩ Max. after the test	25°C
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°C±5°C, 10s±1s
Rapid change of temperature	50mΩ Max. after the test	15mΩ Max. after the test	−55°C (30min.) / +125°C (30min.) 100 cycles
Moisture resistance	100mΩ Max. after the test	18mΩ Max. after the test	40°C±2°C, 90%~95%RH, 1000h 1.5h ON/0.5h OFF cycle
Endurance at 70°C or rated terminal part temperature	100mΩ Max. after the test	18mΩ Max. after the test	70°C±2°C or rated terminal part temperature ±2°C 1000h 1.5h ON/0.5h OFF cycle
High temperature exposure	100mΩ Max. after the test	15mΩ Max. after the test	+125°C, 1000h: 1F +155°C, 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.