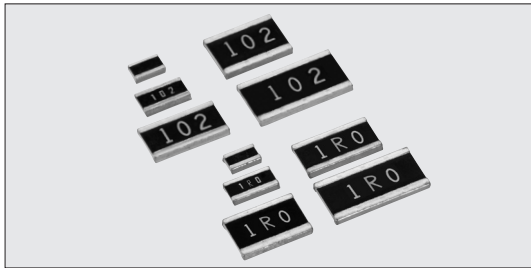


THICK FILM (WIDE TERMINAL TYPE <ANTI SULFURATION>)



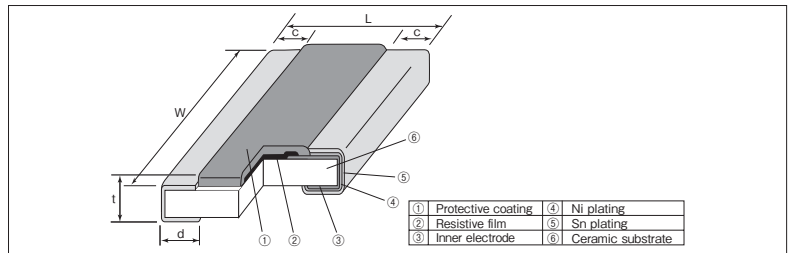
WK73-RT Wide Terminal Type Flat Chip Resistors (Anti Sulfuration)

Flat Chip Resistors



Coating color : Black

Construction



Features

- Anti-sulfuration flat chip resistors of wide terminal type.
- Excellent anti-sulfuration characteristic due to using high sulfuration-proof inner top electrode material.
- Suitable for both flow and reflow solderings.
- This products meet EU-RoHS requirements.
EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified.

Applications

- Car electronics, Power supply, Industrial robot

Dimensions

Type (Inch Size Code)	Dimensions (mm)					Weight (g) (1000pcs)
	L	W	c±0.2	d	t±0.1	
2A (0508)	1.25±0.15	2.0±0.15	0.3	0.35±0.2	0.55	4.93
2B (0612)	1.6 ^{+0.1} _{-0.2}	3.2 ^{+0.1} _{-0.3}	0.3	0.45±0.15	0.6	12.0
2H (1020)	2.5 ^{+0.1} _{-0.2}	5.0 ^{+0.1} _{-0.2}	0.4	0.75±0.15		30.2
2J (1218)	3.1 ^{+0.1} _{-0.2}	4.6 ^{+0.1} _{-0.2}	0.4			33.3
3A (1225)	3.1 ^{+0.2} _{-0.1}	6.3±0.15	0.45			45.6

Type Designation

Example

WK73R	2B	R	T	TD	1002	F
Product Code	Power Rating	Characteristic	Terminal Surface Material	Taping	Nominal Resistance	Resistance Tolerance
WK73S WK73R	2A:0.75W ^{R1} 1W ^{R1} 2B:0.75W 1W ^{R1} 2H:1W 2J:1W 3A:1.5W 2W ^{R1}	R:Anti sulfuration	T: Sn	TD: 4mm pitch punch paper TE: 4mm pitch plastic embossed BK: Bulk	F: 4 digits J: 3 digits	F: ±1% J: ±5%

Resistance Value (Ω)	3 digits	Resistance Value (Ω)	4 digits
1~9.1	1R0~9R1	1~9.76	1R00~9R76

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	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (×10 ⁻⁶ /K)	Resistance Range (Ω)		Max. Working Voltage	Max. Overload Voltage	Taping & Q'ty/Reel (pcs)	
					F: ±1% E24·E96	J: ±5% E24			TD	TE
WK73S2A	1W ^{R1}	70°C	125°C	±100	1~9.76	1~9.1	200V	400V	5,000	-
WK73R2A	0.75W ^{R1} 1W ^{R1}	70°C 70°C	125°C 125°C	±100 ±100	20.5k~1M 10~20k	22k~1M 10~20k				
WK73S2B	0.75W	70°C	125°C	±100	1~9.76	1~9.1				
	1W ^{R1}	70°C	115°C	±100 ±150	0.3~0.976	0.3~0.91				
WK73R2B	0.75W	70°C	125°C	±100	10~9.76k	10~9.1k				
	1W ^{R1}	70°C	115°C	±100 ±200	10~9.76k 10k~1M	10~9.1k 10k~1M				
WK73S2H	1W	70°C	125°C	±100 ±150	1~9.76 0.2~0.976	1~9.1 0.2~0.91				
WK73R2H	1W	70°C	125°C	±100 ±200	10~430k 432k~1M	10~430k 470k~1M				
WK73S2J	1W	70°C	100°C	±100	1~9.76	1~9.1				
WK73R2J	1W	70°C	100°C	±100 ±200	10~510k 511k~1M	10~510k 560k~1M				
	1.5W 2W ^{R1}	70°C 70°C	125°C 115°C	±100 ±100	1~9.76 1~9.76	1~9.1 1~9.1				
WK73R3A	1.5W	70°C	125°C	±100	10~330k	10~330k				
	2W ^{R1}	70°C	115°C	±200	332k~1M	360k~1M				
				±100	10~330k	10~330k				

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

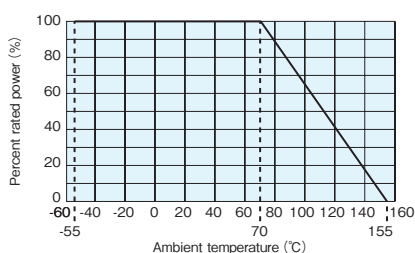
Rated voltage = √(Power Rating × Resistance value) or Max. working voltage, whichever is lower.

※1 If you use at the rated power, please keep the condition that the terminal of the resistor is below the rated terminal part temperature. Please refer to the derating curves based on the terminal temperature of right side on the next page.

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.

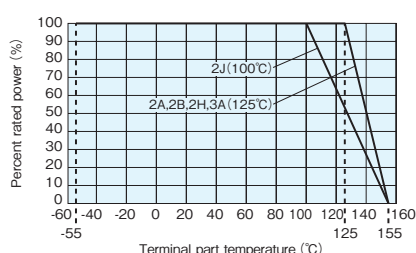
Derating Curve

Ambient temperature



For resistors operated at an ambient temperature of 70°C or higher, the power shall be derated in accordance with the derating curve.

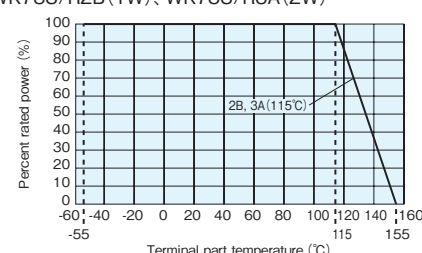
Terminal part temperature



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.

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

Terminal part temperature
WK73S/R2B(1W)、WK73S/R3A(2W)



Performance

Test Items	Performance Requirements $\Delta R \pm (\% + 0.005\Omega)$		Test Methods
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C / -55°C and +25°C / +125°C
Overload (Short time)	2	0.2	Rated voltage $\times 2.5$ for 5s (WK73S/R2A(0.75W, 1W), WK73S/R2B(1W), WK73S/R3A(2W)) Rated voltage $\times 2.0$ for 5s
Resistance to soldering heat	1	0.2	260°C $\pm 5^\circ\text{C}$, 10s ± 1 s
Bending test	1	0.1	Holding point 90mm, Bending 1time. Bending 5mm
Rapid change of temperature	2	1	-55°C (30min.) / +125°C (30min.) 1000 cycles
Moisture resistance	2	0.2	40°C $\pm 2^\circ\text{C}$, 90%~95%RH, 1000h 1.5h ON/0.5h OFF cycle
Endurance at 70°C or rated terminal part temperature	2	0.2	70°C $\pm 2^\circ\text{C}$ or rated terminal part temperature $\pm 2^\circ\text{C}$ 1000h 1.5h ON/0.5h OFF cycle
High temperature exposure	1	0.2	+155°C, 1000h
Sulfuration test	5	0.2	Soaked in industrial oil with sulfur substance 3.5% contained 105°C $\pm 3^\circ\text{C}$ 500h

Please refer to conventional products for characteristic data such as temperature rise.

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 WK73 series which have self-heating. 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.