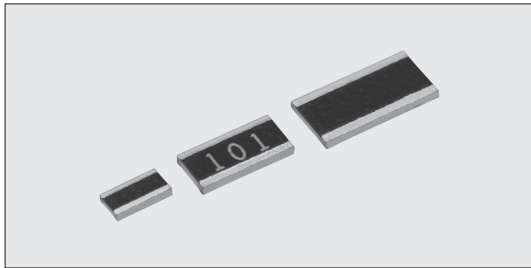


THICK FILM (WIDE TERMINAL TYPE <ANTI SURGE>)



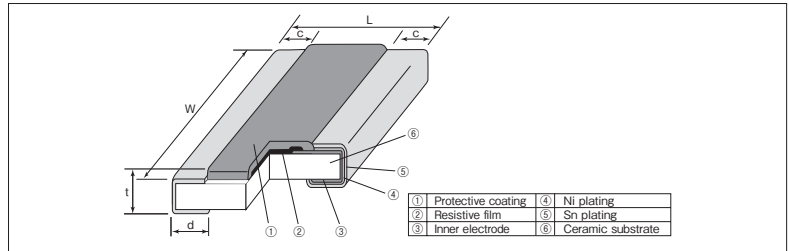
Flat Chip Resistors

WG73 ■ Wide Terminal Type Pulse Power Flat Chip Resistors



Coating color : Wine red

■ Construction



■ Features

- Superior to WK73 series in pulse withstanding voltage.
- Suitable for flow and reflow solderings.
- Products meet EU-RoHS requirements.
- AEC-Q200 Tested.

■ Applications

- E.C.U.

■ Reference Standards

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

■ Dimensions

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

■ Type Designation

Example

WG73	2H	T	TE	101	K
Product Code	Power Rating	Terminal Surface Material	Taping	Nominal Resistance	Resistance Tolerance
	2B : 1W 2H : 1.5W 3A : 2W	T : Sn	TD : 4mm pitch punch paper TE : 4mm pitch plastic embossed BK : Bulk	3 digits	K : ±10% M : ±20%

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)	
					K : ±10% E12	M : ±20% E12			TD	TE
2B	1W	70°C	125°C	±100	560m~1k	560m~1k	200V	400V	5,000	—
2H	1.5W								—	4,000
3A	2W								—	4,000

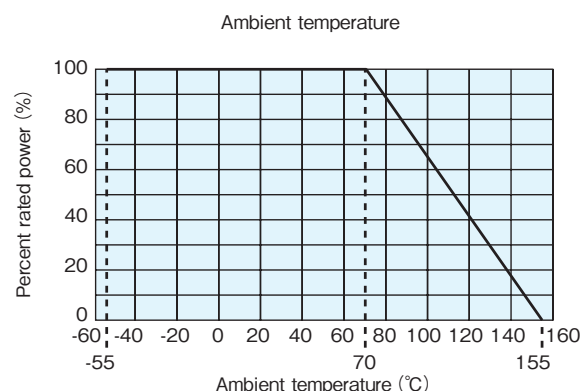
Operating Temperature Range : -55°C ~ +155°C

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

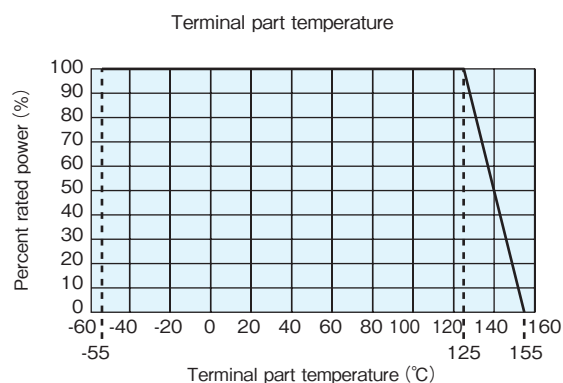
If any questions arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature" in your usage conditions, please give priority to the "Rated Terminal Part Temperature".

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



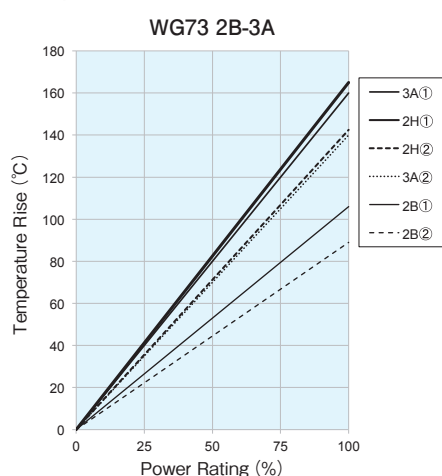
For resistors operated at an ambient temperature of 70°C or higher, the power shall be derated in accordance with the derating curve.



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.

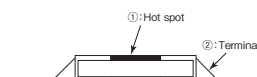
Please refer to "Introduction of the derating curves based on the terminal part temperature" on the beginning of our catalog before use.

Temperature Rise

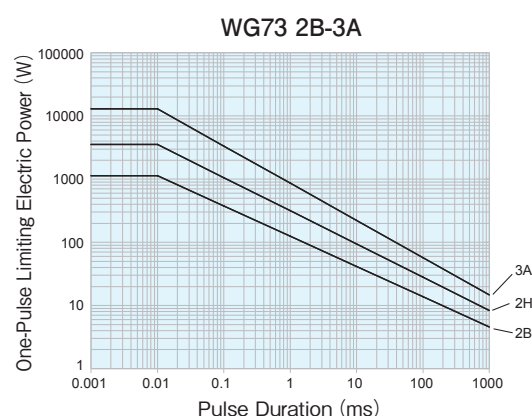


Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

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.

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 (DC) $\times 2.5$ 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

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 WG73 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.