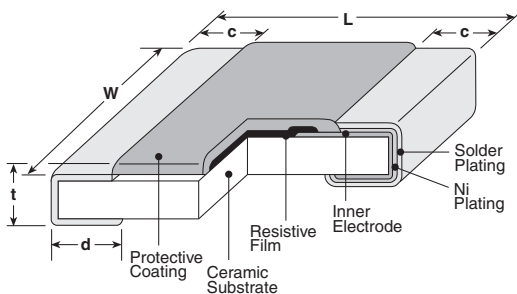


features

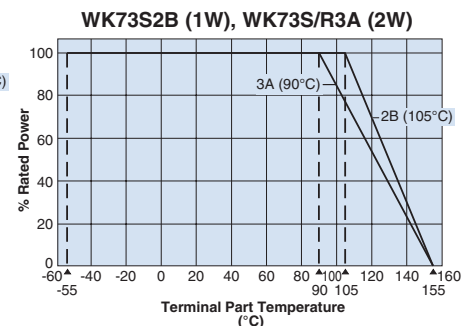
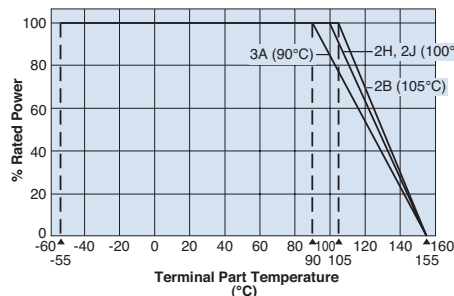
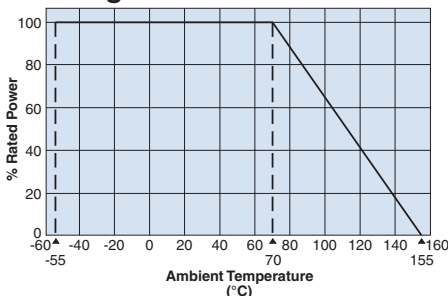
- Wide-side termination (reverse-geometry) type flat chip resistor
- High reliability and performance with T.C.R. $\pm 100 \times 10^{-6}/K$, resistance tolerance $\pm 1\%$
- Marking: Black protective coat
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified: 0612(2B), 1020(2H), 1218(2J), 1225(3A)

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
2B (0612)	.063±.006 (1.6±0.15)	.126±.006 (3.2±0.2)	.012±.008 (0.3±0.2)	.018±.006 (0.45±0.15)	.024±.004 (0.6±0.1)
2H (1020)	.098±.006 (2.5±0.15)	.197±.006 (5.0±0.15)	.016±.008 (0.4±0.2)		
2J (1218)	.122±.006 (3.1±0.15)	.181±.006 (4.6±0.15)	.016±.008 (0.4±0.2)	.030±.006 (0.75±0.15)	
3A (1225)	.122±.006 (3.1±0.15)	.252±.006 (6.3±0.15)	.018±.008 (0.45±0.2)		

Derating Curve



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

For resistors operated terminal temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve above. Please refer to "Introduction of the derating curve based on the terminal part temperature" on the beginning of our catalog before use. If you want to use at rated power (*1), use derating curves based on the terminal part temperature on the right side graph.

ordering information

New Part #	WK73S	2J	T	TE	33L0	F
Type	WK73S WK73R	Size	Termination Material	Packaging	Nominal Resistance	Resistance Tolerance
		R2B: 0.75W S2B: 0.75W, 1W 2H: 1W 2J: 1W 3A: 1.5W, 2W	T: Sn	TD: 0612: 7" 4mm pitch punched paper TE: 1020, 1218, 1225: 7" embossed plastic TED: 1020, 1218, 1225: 10" embossed plastic For further information on packaging, please refer to Appendix A	±1%: 3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω ±5%: 2 significant figures + 1 multiplier "R" indicates decimal on values <10Ω All values less than 0.1Ω (100mΩ) are expressed in mΩ with "L" as decimal. Ex: 33mΩ, 1% = 33L0	D: ±0.5% F: ±1% J: ±5%

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

10/21/15

applications and ratings

Part Designation	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (X 10 ⁻⁶ /K)	Resistance Range (Ω)			Maximum Working Voltage	Maximum Overload Voltage	Operating Temp. Range		
					D±0.5% E-24/E-96	F±1% E-24/E-96	J±5% E-24					
WK73S2B	0.75W	70°C	105°C	±800	—	—	10m - 27m	200V	400V	-55°C to +155°C		
				±200	—	30m - 422m	30m - 390m					
				±100	430m - 9.76	430m - 9.76	430m - 9.1					
	1.0W ¹	—	105°C	±800	—	—	10m - 27m					
				±200	—	30m - 422m	30m - 390m					
				±100	430m - 9.76	430m - 9.76	430m - 9.1					
WK73R2B	0.75W	70°C	105°C	±100	10 - 1M	10 - 1M	10 - 1M	200V	400V			
WK73S2H	1.0W	70°C	100°C	±800	—	—	10m - 24m					
				±200	—	27m - 215m	27m - 200m					
				±100	—	220m - 9.76	220m - 9.1					
WK73R2H	1.0W	70°C	100°C	±100	—	10 - 430k	10 - 430k				200V	400V
				±200	—	432k - 1M	470k - 1M					
WK73S2J	1.0W	70°C	100°C	±800	—	—	10m - 30m	200V	400V			
				±200	—	33m - 237m	33m - 220m					
				±100	—	240m - 9.76	240m - 9.1					
WK73R2J	1.0W	70°C	100°C	±100	—	10 - 510k	10 - 510k			200V		
				±200	—	511k - 1M	560k - 1M					
WK73S3A	1.5W	70°C	90°C	±800	—	—	10m - 20m				200V	400V
				±300	—	22m - 32.4m	22m - 30m					
				±200	—	33m - 357m	33m - 330m					
	2.0W ¹	—	90°C	±100	—	360m - 9.76	360m - 9.1					
				±800	—	—	10m - 20m					
				±300	—	22m - 32.4m	22m - 30m					
WK73R3A	1.5W	70°C	90°C	±200	—	33m - 357m	33m - 330m	200V	400V			
				±100	—	360m - 9.76	360m - 9.1					
				±100	—	10 - 330k	10 - 330k					
WK73R3A	2.0W	—	90°C	±200	—	332k - 1M	360k - 1M			200V	400V	
				±100	—	10 - 330k	10 - 330k					
WK73R3A	2.0W	—	90°C	±200	—	332k - 1M	360k - 1M			200V	400V	
				±100	—	10 - 330k	10 - 330k					

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

¹ If you want to use at rated power use derating curves based on the terminal part temperature on the right side graph located on previous page. If any questions arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature", please give priority to the "Rated Terminal Part Temperature." For more details refer to the "Introduction of the derating curves based on the terminal part temperature" in the beginning of the catalog

environmental applications

Performance Characteristics

Parameter	Requirement $\Delta R \pm (\%+0.005\Omega)$		Test Method
	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%	WK73S2B (1W), WK73S/R3A (2W): Rated voltage x2.0 for 5 seconds WK73S/R2B, S2H, S/R2H, S/R2J, S/R3A: Rated voltage x2.5 for 3 seconds
Resistance to Solder Heat	±1%	±0.2%	260°C ± 5°C, 10 seconds ± 1 second
Bending Test	±1%	±0.1%	Holding point 90mm, Bending 1 time, Bending 5mm
Rapid Change of Temperature	±0.5%	±0.1%	-55°C (30 minutes), +155°C (30 minutes), 5 cycles
Moisture Resistance	±2%	±0.2%	40°C ± 2°C, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±2%	±0.2%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±2%: WK73S (±5%) ±1%: all others	±0.5%: WK73S (±5%) ±0.2%: all others	+155°C, 1000 hours

Additional environmental applications can also be found at www.koaspeer.com

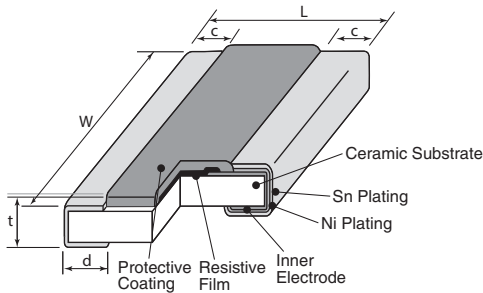
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

11/03/15

features

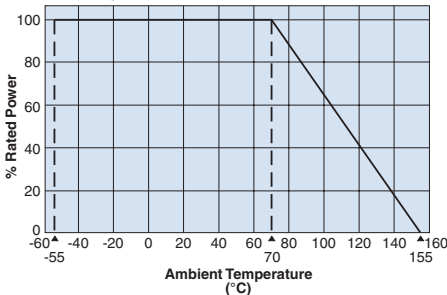
- Anti-sulfuration type, wide-side termination (reverse-geometry) type flat chip resistor
- Excellent anti-sulfuration characteristic due to using high sulfuration-proof inner top electrode material
- Suitable for both flow and reflow solderings
- Marking: Black coating color
- This products meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified

dimensions and construction

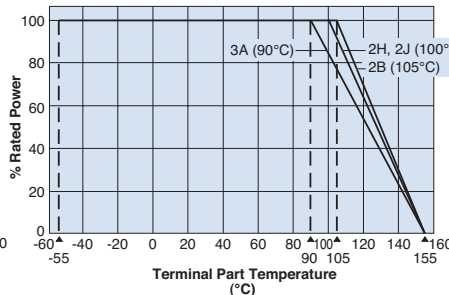


Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
2B (0612)	.063 ^{+0.004} _{-0.008} (1.6 ^{+0.1} _{-0.2})	.126 ^{+0.004} _{-0.012} (3.2 ^{+0.1} _{-0.3})	.012 ^{±0.008} (0.3 ^{±0.2})	.018 ^{±0.006} (0.45 ^{±0.15})	.024 ^{±0.004} (0.6 ^{±0.1})
2H (1020)	.098 ^{+0.004} _{-0.008} (2.5 ^{+0.1} _{-0.2})	.197 ^{+0.004} _{-0.008} (5.0 ^{+0.1} _{-0.2})	.016 ^{±0.008} (0.4 ^{±0.2})	.030 ^{±0.006} (0.75 ^{±0.15})	
2J (1218)	.122 ^{+0.004} _{-0.008} (3.1 ^{+0.1} _{-0.2})	.181 ^{+0.004} _{-0.008} (4.6 ^{+0.1} _{-0.2})	.016 ^{±0.008} (0.4 ^{±0.2})	.030 ^{±0.006} (0.75 ^{±0.15})	.024 ^{±0.004} (0.6 ^{±0.1})
3A (1225)	.122 ^{+0.008} _{-0.004} (3.1 ^{+0.2} _{-0.1})	.248 ^{±0.006} (6.3 ^{±0.15})	.018 ^{±0.008} (0.45 ^{±0.2})	.030 ^{±0.006} (0.75 ^{±0.15})	

Derating Curve



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

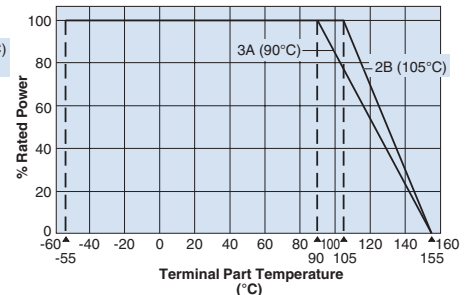


For resistors operated terminal temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve.

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

When using Power Rating', please use the derating curves based on the terminal part temperature on the right side.

WK73S2B (1W), WK73S/R3A (2W)



ordering information

New Part #	WK73R	R2B	RT	TD	10R0	F
Type	WK73S WK73R	Size	Termination Material	Packaging	Nominal Resistance*	Resistance Tolerance
		2B: 0.75W, 1W 2H: 1W 2J: 1W 3A: 1.5W, 2W	RT : Sn	TD: 4mm pitch punched paper TE: 4mm pitch embossed plastic For further information on packaging, please refer to Appendix A	±1%: 4 digits ±5%: 3 digits	F: ±1% J: ±5%
					* Resistance value, 3 digits: 1~9.1Ω, 1R0~9R1 Resistance value, 4 digits: 1~9.76Ω, 1R00~9R76	

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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applications and ratings

Part Designation	Power Rating	Rated Ambient Temperature	Rated Terminal Part Temperature	T.C.R. (X 10 ⁻⁶ /K)	Resistance Range (Ω)		Maximum Working Voltage	Maximum Overload Voltage	Operating Temperature Range
					F±1% E-24 • E-96	J±5% E-24			
WK73S2B	0.75W	70°C	105°C	±100	1 ~ 9.76	1~9.1	200V	400V	-55°C to +155°C
	1.0W ¹	—	105°C	±100	1 ~ 9.76	1~9.1			
WK73R2B	0.75W	70°C	105°C	±100	10 ~ 9.76k	10 ~ 9.1k	200V	400V	
				±200	10k ~ 1M	10k ~ 1M			
WK73S2H	1.0W	70°C	100°C	±100	1 ~ 9.76	1 ~ 9.1	200V	400V	
WK73R2H	1.0W	70°C	100°C	±100	10 ~ 430k	10 ~ 430k			
WK73S2J	1.0W	70°C	100°C	±100	1 ~ 9.76	1~9.1	200V	400V	
				±200	432k - 1M	470k - 1M			
WK73R2J	1.0W	70°C	100°C	±100	10 ~ 510k	10 ~ 510k	200V	400V	
				±200	511k ~ 1M	560k ~ 1M			
WK73S3A	1.5W	70°C	90°C	±100	1 ~ 9.76	1 ~ 9.1	200V	400V	
	2.0W ¹	—	90°C	±100	1 ~ 9.76	1 ~ 9.1			
WK73R3A	1.5W	70°C	90°C	±100	10 ~ 330k	10 ~ 330k	200V	400V	
				±200	332k - 1M	360k - 1M			
	2.0W ¹	—	90°C	±100	10 ~ 330k	10 ~ 330k			
				±200	332k - 1M	360k - 1M			

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

¹ When using Power Rating, please use the derating curves based on the terminal part temperature on the right side of the graph located on the previous page.

environmental applications

Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.005\Omega)$		Test Method
	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%	WK732B, S2H, R2H, S2J, R2J: Rated voltage x 2.5 for 5 seconds WK73S2B (1W), WK73S/R3A: Rated voltage x 2.0 for 5 seconds
Resistance to Solder Heat	±1%	±0.2%	260°C ± 5°C, 10 seconds ± 1 second
Bending Test	±1%	±0.1%	Holding point 90mm, Bending 1 time, Bending 5mm
Rapid Change of Temperature	±0.5%	±0.1%	-55°C (30 minutes), +155°C (30 minutes), 5 cycles
Moisture Resistance	±2%	±0.2%	40°C ± 2°C, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±2%	±0.2%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%: another	±0.2%: another	+155°C, 1000 hours
Sulfuration Test	±5%	—	Soaked in industrial oil with 3.5% sulfur concentration 105°C ± 3°C, 500 hours

Additional environmental applications can also be found at www.koaspeer.com

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

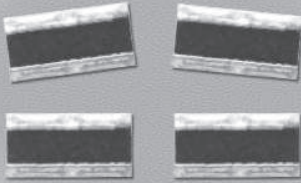
12/03/15

wide terminal type low resistance flat chip resistors

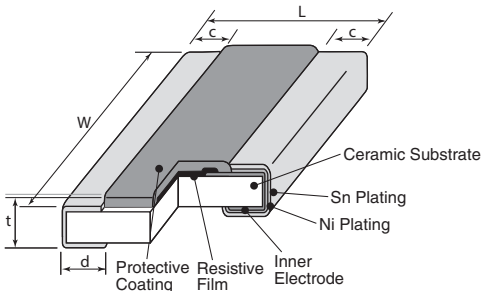

NEW

features

- Wide terminal type flat chip resistor
- High reliability and performance with T.C.R. $\pm 100 \times 10^{-6}/K$, resistance tolerance $\pm 1\%$
- Suitable for flow and reflow solderings
- Black coating color
- This product meets EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified

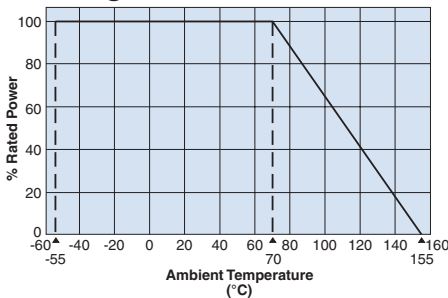


dimensions and construction

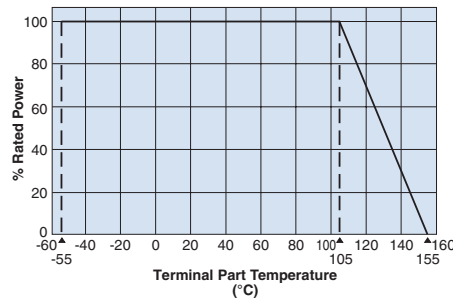


Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
2B (0612)	.063±.006 (1.6±0.15)	.126± ^{+0.004} _{-.012} (3.2± ^{+0.1} _{-.03})	.016±.008 (0.4±0.2)	.018±.006 (0.45±0.15)	.024±.004 (0.6±0.1)

Derating Curve



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



For resistors operated at a terminal part temperature of 105°C or above, the power rating shall be derated in accordance with the above derating curve. Please refer to the "Introduction of the derating curves based on terminal part temperature" in the beginning of the catalog.

ordering information

New Part #	WU73	2B	T	TD	10L0	F
Type	WU73	Size	Termination Material	Packaging	Nominal Resistance*	Resistance Tolerance
	WU73	2B: 1W	T : Sn	TD: 4mm pitch punched paper For further information on packaging, please refer to Appendix A	4 digits: 3 significant figures + 1 multiplier Ex. 10L0: 10mΩ R100: 100mΩ	F: ±1%

* Resistance value: 10mΩ~75mΩ = 10L0~75L0
Resistance value: 0.1Ω = R100

applications and ratings

Part Designation	Power Rating	Rated Ambient Temperature	Rated Terminal Part Temperature	T.C.R. (X 10 ⁻⁶ /K)	Resistance Range (Ω) E-24, 25m, 50m	Resistance Tolerance	Operating Temperature Range
WU732B	1.0W	70°C	105°C	±150	10m~12m	F: ±1%	-55°C to +155°C
				±100	13m~100m		

Rated voltage = $\sqrt{\text{Power rating} \times \text{resistance value}}$

If any questions should arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature," please give priority to the "Rated Terminal Part Temperature." Prior to use and for more details refer to "Introduction of the derating curves on the terminal part temperature" in the beginning of the catalog.

environmental applications

Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.005\Omega)$		Test Method
	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 x 2 for 5 seconds
Resistance to Solder Heat	±1%	±0.2%	260°C ± 5°C, 10 seconds ± 1 second
Bending Test	±1%	±0.1%	Holding point 90mm, Bending 1 time, Bending 5mm
Rapid Change of Temperature	±2%	±0.3%	-55°C (30 minutes), +125°C (30 minutes), 1000 cycles
Moisture Resistance	±2%	±0.1%	40°C ± 2°C, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±2%	±0.2%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.1%	+155°C, 1000 hours

Additional environmental applications can also be found at www.koaspeer.com

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

12/03/15