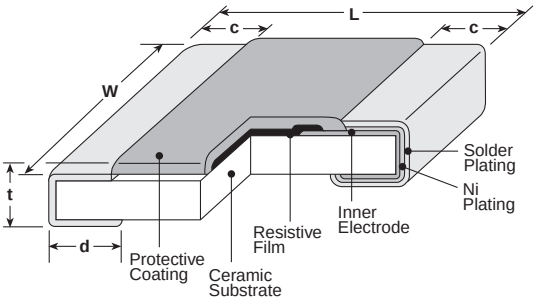
EU RoHS COMPLIANT

features

- Wide-side termination (reverse-geometry) type flat chip resistor
- High reliability and performance with T.C.R. ±100 x 10^{-6}/K, resistance tolerance ±0.5%
- 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 Tested

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm) L	W	c	d	t
1E (0204)	.020±.002 (0.5±0.05)	.039±.002 (1.0±0.05)	.006±.002 (0.15±0.05)	.006±.002 (0.15±0.05)	.014±.002 (0.35±0.05)
1J (0306)	.031±.004 (0.8±0.1)	.063±.004 (1.6±0.1)	.006±.004 (0.15±0.1)	.008±.004 (0.2±0.1)	.018±.004 (0.45±0.1)
2A (0508)	.049±.006 (1.25±0.15)	.079±.006 (2.0±0.15)	.012±.008 (0.3±0.2)	.014±.008 (0.35±0.2)	.022±.004 (0.55±0.1)
2B (0612)	.063±.006 (1.6±0.15)	.126±.008 (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)	.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)		

ordering information

WK73R	1J	T	TE	33L0	F
Type	**Size**	**Termination Material**	**Packaging**	**Nominal Resistance**	**Resistance Tolerance**
WK73R	1E: 0.33W[1] 1J: 0.5W[1], 0.66W[1] 2A: 0.75W[1], 1W[1] 2B: 0.75W[1], 1.5W[1] 2H: 1W[1], 2W[1] 3A: 1.5W, 3W[1]	T: Sn	TP: 0204: 7" 2mm pitch punched paper TD: 0306, 0508, 0612: 7" 4mm pitch punched paper TE: 1020, 1225: 7" 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%

[1] If you want to use at rated power use the derating curves based on the terminal part temperature on the next page.

KOA SPEER ELECTRONICS, INC.

WK73R

wide terminal type flat chip resistors

applications and ratings

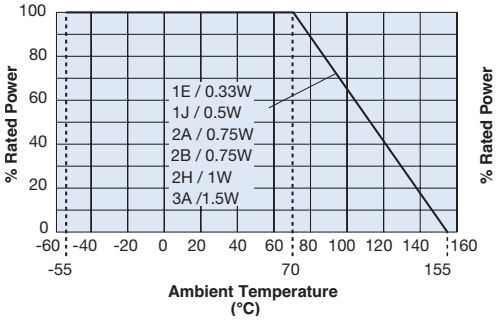
Part Designation	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (X 10^{-6}/K)	Resistance Range (Ω)			Maximum Working Voltage	Maximum Overload Voltage	Operating Temp. Range
					D±0.5% E-24/E-96	F±1% E-24/E-96	J±5% E-24			
WK73R1E (0204)	0.33W[1]	70°C	125°C	±100	—	10 -1M	10 - 1M	75V	100V	-55°C to +155°C
WK73R1J (0306)	0.5W[1]	70°C	125°C	±100	—	10 -1M	10 -1M	150V	200V	
	0.66W[1]	—				10 - 9.76k	10 - 9.1k			
WK73R2A (0508)	0.75W[1]	70°C	125°C	±100	—	20.5k - 1M	22k-1M	200V	400V	
	1.0W[1]	—	125°C	±100	—	10 - 20k	10 - 20k			
WK73R2B (0612)	0.75W	70°C	125°C	±100	10 - 1M	10 - 1M	10 - 1M	200V	400V	
	1.5W[1]	—	125°C	±100	10 - 9.76k	10 - 9.76k	10 - 9.1k			
WK73R2H (1020)	1.0W	70°C	125°C	±100	—	10 - 430k	10 - 430k	200V	400V	
				±200	—	432k - 1M	470k - 1M			
	2W[1]	—	125°C	±100	—	10 - 430k	10 - 430k			
				±200	—	432k - 1M	470k - 1M			
WK73R3A (1225)	1.5W	70°C	125°C	±100	—	10 - 330k	10 - 330k	200V	400V	
				±200	—	332k - 1M	360k - 1M			
	3W[1]	—	125°C	±100	—	10 - 330k	10 - 330k			
				±200	—	332k - 1M	360k - 1M			

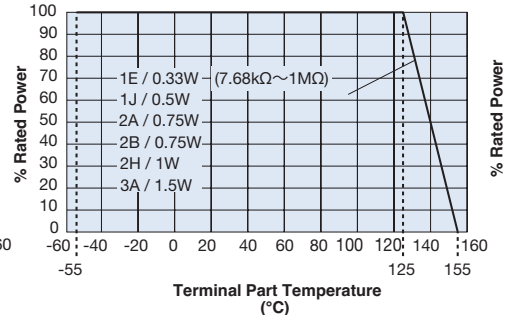
Rated voltage = $\sqrt{\text{Power rating x resistance value}}$ or max. working voltage, whichever is lower

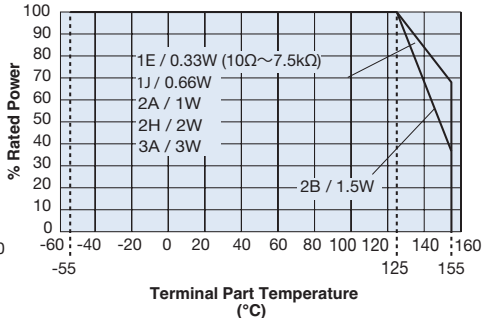
[1] If you want to use at rated power use derating curves based on the terminal part temperature on the right side graph located below. If any questions arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature", please give priority to the "Rated Terminal Part Temperature." 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

Derating Curve







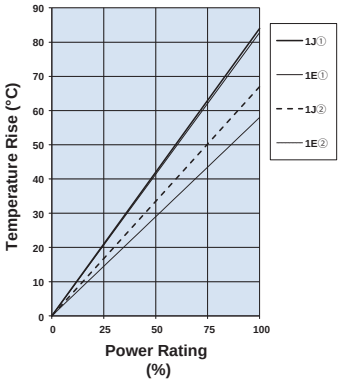
For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

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.

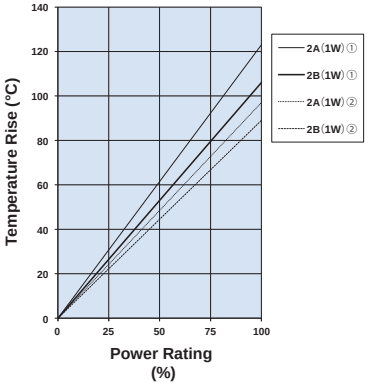
Please refer to "Introduction of the derating curves based on the terminal part temperature" in the beginning of the catalog before use.

Temperature Rise

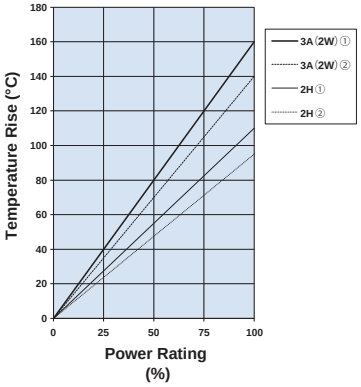
WK73R 1E-1J



WK73R 2A-2B

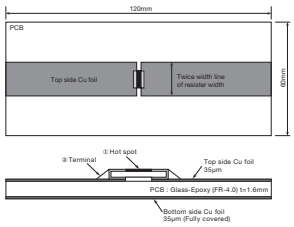


WK73R 2H-3A



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.

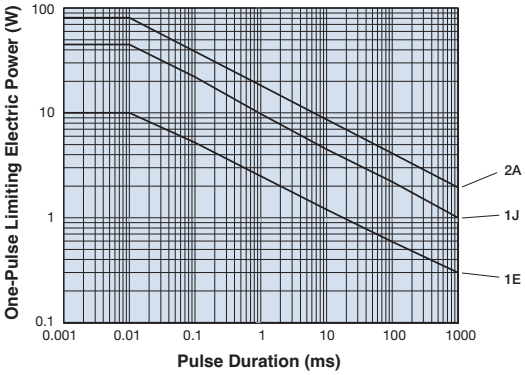
Simulated and Measurement Conditions



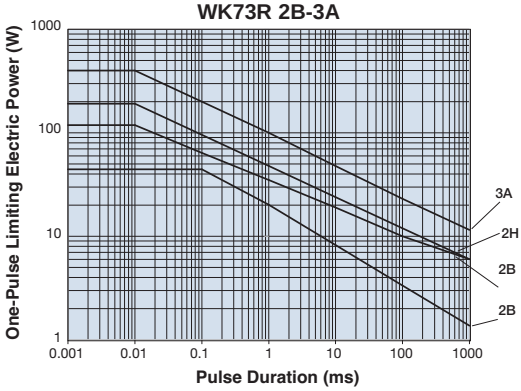
Temperature rise is simulated and measured under our conditions. So, the values will vary depending on the operating conditions and PCB used.

One-Pulse Limiting Electric Power

WK73R 1E-2A



WK73R 2B-3A



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 Characteristics

Parameter	Requirement Δ R ±(%+0.005Ω) Limit	Typical	Test Method
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%	Overload wattage for 5s

Type (Resistance Range/Ω)	1E	1J	2A		2B		2H	3A
			10~20k	20.5k~1M	10~10k	10.2k~1M		
Overload Wattage	1.32W	3.125W	4W	3W	6W	4.688W	8W	12W

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%	±1%	-55°C (30 minutes) / +125°C (30 minutes), 1000 cycles
Moisture Resistance	±3%: 1E ±2%: All others	±1%: 1E ±0.2%: All others	40°C ± 2°C, 90%~95% RH, 1000 hours; 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±3%: 1E ±2%: All others	±1%: 1E ±0.2%: All others	70°C ± 2°C or rated terminal part temperature ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.2%	+155°C, 1000 hours

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

3/17/25

Mouser Electronics

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KOA Speer:

WK73R2HTTE1000F WK73R2HTTE20R0F WK73R2HTTE182J WK73R3ATTE220J WK73R3ATTE391J WK73R3ATTE330J WK73R3ATTE301J WK73R2HTTE100J WK73R2HTTE241J WK73R2HTTE1001F WK73R2HTTE1002F WK73R2HTTE101J WK73R2HTTE102J WK73R2HTTE103J WK73R2HTTE104J WK73R2HTTE121J WK73R2HTTE122J WK73R2HTTE132J WK73R2HTTE151J WK73R2HTTE152J WK73R2HTTE10R0F WK73R3ATTE471J WK73R3ATTE750J WK73R3ATTE102J WK73R3ATTE101J WK73R3ATTE1001F WK73R2HTTE153J WK73R3ATTE1000F WK73R3ATTE100J WK73R2HTTE202J WK73R3ATTE472J WK73R2HTTE222J WK73R3ATTE103J WK73R3ATTE911J WK73R2HTTE331J WK73R2HTTE330J WK73R2HTTE272J WK73R2HTTE242J WK73R3ATTE10R0F WK73R3ATTE1003F WK73R3ATTE1004F WK73R3ATTE104J WK73R3ATTE105J WK73R3ATTE1100F WK73R3ATTE1101F WK73R3ATTE1102F WK73R3ATTE1103F WK73R3ATTE110J WK73R3ATTE111J WK73R3ATTE112J WK73R3ATTE113J WK73R3ATTE114J WK73R3ATTE11R0F WK73R3ATTE1200F WK73R3ATTE1201F WK73R3ATTE1202F WK73R3ATTE1203F WK73R3ATTE120J WK73R3ATTE121J WK73R3ATTE122J WK73R3ATTE123J WK73R3ATTE124J WK73R3ATTE12R0F WK73R3ATTE1300F WK73R3ATTE1301F WK73R3ATTE1303F WK73R3ATTE130J WK73R3ATTE131J WK73R3ATTE132J WK73R3ATTE133J WK73R3ATTE134J WK73R3ATTE13R0F WK73R3ATTE1500F WK73R3ATTE1501F WK73R3ATTE1502F WK73R3ATTE1503F WK73R3ATTE150J WK73R3ATTE151J WK73R3ATTE152J WK73R3ATTE153J WK73R3ATTE154J WK73R3ATTE15R0F WK73R3ATTE1600F WK73R3ATTE1601F WK73R3ATTE1602F WK73R3ATTE1603F WK73R3ATTE160J WK73R3ATTE161J WK73R3ATTE162J WK73R3ATTE163J WK73R3ATTE164J WK73R3ATTE16R0F WK73R3ATTE1800F WK73R3ATTE1801F WK73R3ATTE1802F WK73R3ATTE1803F WK73R3ATTE180J WK73R3ATTE181J WK73R3ATTE182J WK73R3ATTE183J