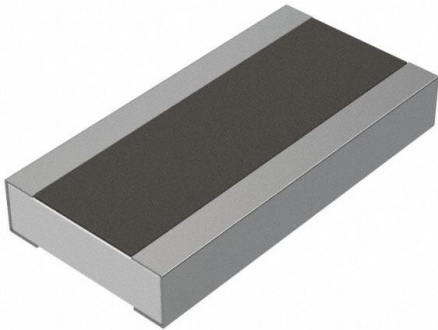


# WK73R2BTDD1071D Datasheet

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DiGi Electronics Part Number	WK73R2BTDD1071D-DG
Manufacturer	<a href="#">KOA Speer Electronics, Inc.</a>
Manufacturer Product Number	WK73R2BTDD1071D
Description	RES 1.07K OHM 0.5% 1W 1206
Detailed Description	1.07 kOhms $\pm$ 0.5% 1W Chip Resistor Wide 1206 (3216 Metric), 0612 Automotive AEC-Q200, Moisture Resistant Thick Film

This model WK73R2BTDD1071D is available at DiGi Electronics.

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DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

WK73R2BTDD1071D

Series:

WK73R

Resistance:

1.07 kOhms

Power (Watts):

1W

Features:

Automotive AEC-Q200, Moisture Resistant

Operating Temperature:

-55°C ~ 155°C

Supplier Device Package:

-

Size / Dimension:

0.063" L x 0.126" W (1.60mm x 3.20mm)

Number of Terminations:

2

Manufacturer:

KOA Speer Electronics, Inc.

Product Status:

Active

Tolerance:

±0.5%

Composition:

Thick Film

Temperature Coefficient:

±100ppm/°C

Package / Case:

Wide 1206 (3216 Metric), 0612

Ratings:

AEC-Q200

Height - Seated (Max):

0.028" (0.70mm)

Base Product Number:

WK73R2B

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8533.21.0030

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

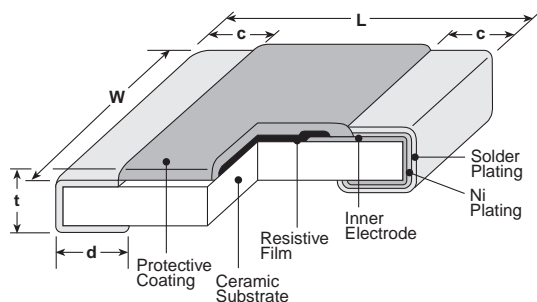
EAR99



### 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  $\pm 0.5\%$
- 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
<b>1E</b> (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)
<b>1J</b> (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)
<b>2A</b> (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)
<b>2B</b> (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)
<b>2H</b> (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)	
<b>3A</b> (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
<b>Type</b>	<b>Size</b>	<b>Termination Material</b>	<b>Packaging</b>	<b>Nominal Resistance</b>	<b>Resistance Tolerance</b>
WK73R	1E: 0.33W <sup>1</sup> 1J: 0.5W <sup>1</sup> 2A: 0.75W <sup>1</sup> , 1W <sup>1</sup> 2B: 0.75W <sup>1</sup> , 1W <sup>1</sup> 2H: 1W <sup>1</sup> 3A: 1.5W, 2W <sup>1</sup>	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%



**wide terminal type flat chip resistors**

resistors

**applications and ratings**

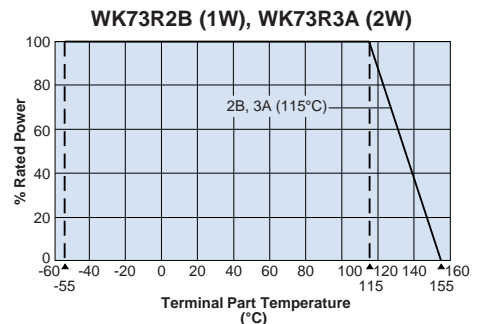
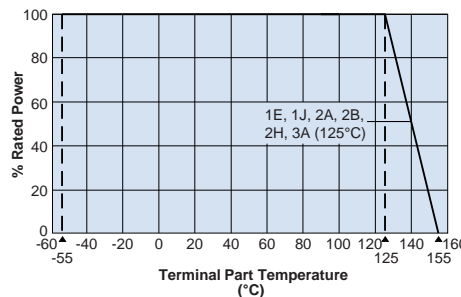
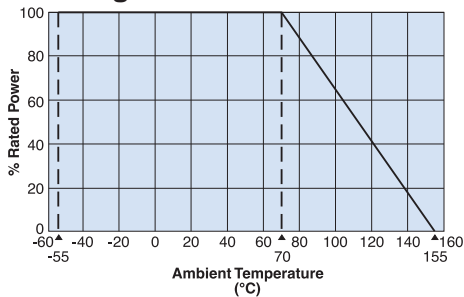
Part Designation	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (X 10 <sup>-6</sup> /K)	Resistance Range (Ω)			Maximum Working Voltage	Maximum Overload Voltage	Operating Temp. Range
					D±0.5% E-24/E-96	F±1% E-24/E-96	J±5% E-24			
WK73R1E (0204)	0.33W <sup>1</sup>	70°C	125°C	±100	—	10 - 1M	10 - 1M	75V	100V	-55°C to +155°C
WK73R1J (0306)	0.5W <sup>1</sup>	70°C	125°C	±100	—	10 - 1M	10 - 1M	150V	200V	
WK73R2A (0508)	0.75W <sup>1</sup>	70°C	125°C	±100	—	20.5k - 1M	22k - 1M	200V	400V	
	1.0W <sup>1</sup>	70°C	125°C	±100	—	10 - 20k	10 - 20k			
WK73R2B (0612)	0.75W	70°C	125°C	±100	10 - 1M	10 - 1M	10 - 1M	200V	400V	
	1.0W <sup>1</sup>	70°C	115°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			
WK73R3A (1225)	1.5W	70°C	125°C	±100	—	10 - 330k	10 - 330k	200V	400V	
				±200	—	332k - 1M	360k - 1M			
	2.0W <sup>1</sup>	70°C	115°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

<sup>1</sup> 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**

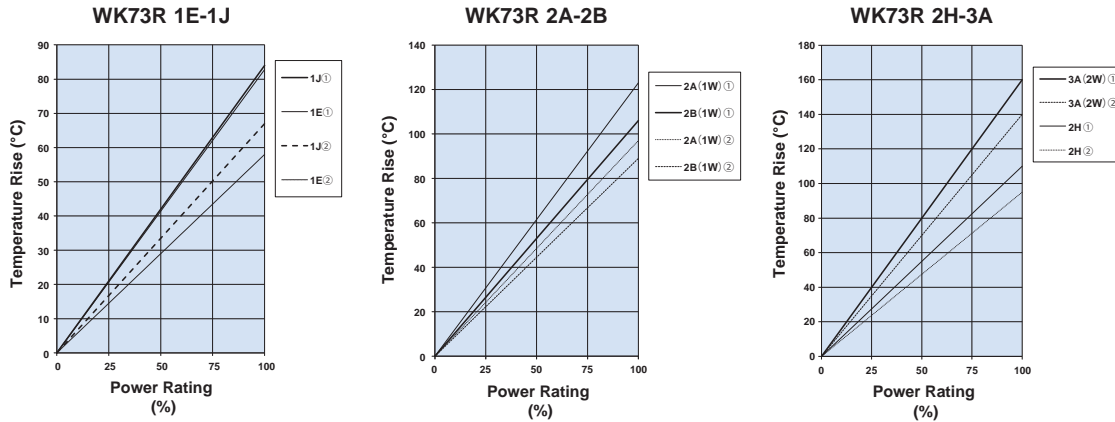
**Derating Curve**



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.

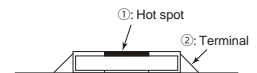
For resistors operated terminal temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve above. Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use. If you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

### Temperature Rise

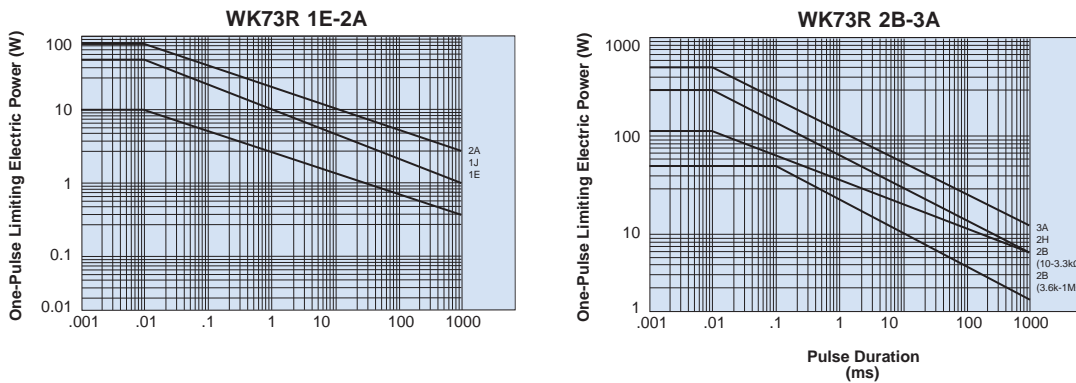


Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

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 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%	WK73R1E (0.33W), WK73R2A (0.75W, 1W), WK73R3A (2W): Rated voltage x 2.0 for 5 seconds. Others: Rated voltage x 2.5 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	±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](http://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.

11/26/24

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