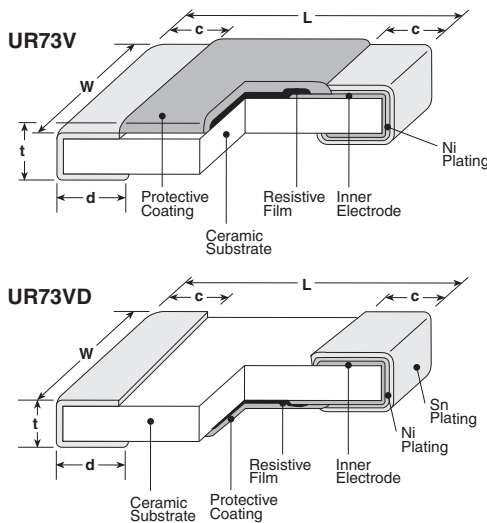




### features

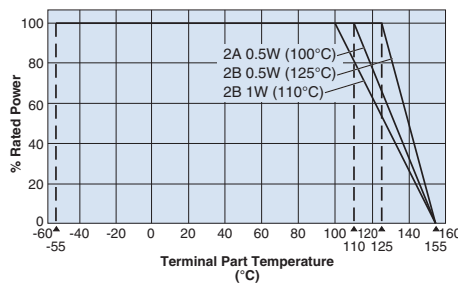
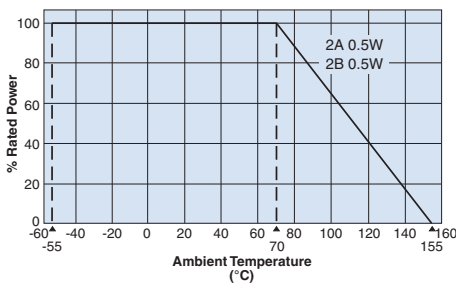
- Current detecting resistors for power supplies, motor circuits, etc.
- Low resistance (100mΩ or under) and high accuracy ( $\pm 1\%$ ) for current detection
- High reliability and performance with T.C.R.  $\pm 75 \times 10^{-6}/K$
- Suitable for flow and reflow solderings
- Products will meet EU RoHS requirements
- AEC-Q200 tested

### dimensions and construction



Size Code	Resistance Range ( $\Omega$ )	Dimensions inches (mm)				
		L	W	c	d	t
UR73VD 2A (0805)	10m~16m	.079 $\pm$ .008 (2.0 $\pm$ 0.2)	.049 $\pm$ .008 (1.25 $\pm$ 0.2)	.016 $\pm$ .008 (0.4 $\pm$ 0.2)	.028 $\pm$ .008 (0.7 $\pm$ 0.2)	.024 $\pm$ .004 (0.6 $\pm$ 0.1)
	18m~36m				.024 $\pm$ .008 (0.6 $\pm$ 0.2)	
UR73V 2A (0805)	39m~100m	.079 $\pm$ .008 (2.0 $\pm$ 0.2)	.049 $\pm$ .008 (1.25 $\pm$ 0.2)	.016 $\pm$ .008 (0.4 $\pm$ 0.2)	.016 $\pm$ .008 (0.4 $\pm$ 0.2)	.024 $\pm$ .004 (0.6 $\pm$ 0.1)
UR73VD 2B (1206)	10m~13m				.049 $\pm$ .008 (1.25 $\pm$ 0.2)	
	15m~16m	.126 $\pm$ .008 (3.2 $\pm$ 0.2)	.063 $\pm$ .008 (1.6 $\pm$ 0.2)	.016 $\pm$ .012 (0.4 $\pm$ 0.3)	.045 $\pm$ .008 (1.15 $\pm$ 0.2)	.024 $\pm$ .004 (0.6 $\pm$ 0.1)
	18m~20m				.043 $\pm$ .008 (1.1 $\pm$ 0.2)	
	22m~27m				.039 $\pm$ .008 (1.0 $\pm$ 0.2)	
UR73V 2B (1206)	30m~33m			.039 $\pm$ .012 (1.0 $\pm$ 0.3)	.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-.01</sub> )	.024 $\pm$ .004 (0.6 $\pm$ 0.1)
	36m~39m	.126 $\pm$ .008 (3.2 $\pm$ 0.2)	.063 $\pm$ .008 (1.6 $\pm$ 0.2)	.035 $\pm$ .012 (0.9 $\pm$ 0.3)		
	43m~100m			.026 $\pm$ .012 (0.65 $\pm$ 0.3)		

### 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 described for each size or above, the power rating shall be derated in accordance with the above derating curve. Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog prior use.

### ordering information

UR73V	2B	T	TD	30L0	F
<b>Type</b>	<b>Power Rating</b>	<b>Termination Material</b>	<b>Packaging</b>	<b>Nominal Resistance</b>	<b>Tolerance</b>
UR73V UR73VD: Face-down	2A: 0.5W 2B: 0.5W 2B: 1W	T: Sn	TD: 4mm pitch punch paper	"R" indicates decimal on values = 100mΩ Ex: R100 = 100mΩ "L" indicates decimal on values <100mΩ Ex: 10L0 = 10mΩ	F: $\pm 1\%$

For further information on packaging, please refer to Appendix A.

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

3/03/22

### applications and ratings

Part Designation	Power* Rating	Rated Ambient Temperature	Rated Terminal Temperature	T.C.R. (X10 <sup>-6</sup> /K)	Resistance Range (Ω) E24 & 25m, 50m	Resistance Tolerance	Operating Temperature Range
UR73V 2A	0.5W	70°C	100°C	±75	39m~100m	F: ±1%	-55°C to +155°C
UR73VD 2A	0.5W	70°C	100°C	±75	15m~36m		
				0~+150	12m~13m		
				0~+250	10m~11m		
UR73V 2B	0.5W	70°C	125°C	±75	33m~75m		
				±100	30m, 82m~100m		
				±75	33m~75m		
UR73VD 2B	0.5W	70°C	125°C	0~+250	10m~11m		
				±75	12m~27m		
				0~+250	10m, 11m		
UR73VD 2B	1W**	70°C	95°C	±100	30m, 82m~100m		
				±75	33m~75m		
				±100	30m, 82m~100m		
UR73VD 2B	1W**	70°C	95°C	0~+250	10m~11m		
				±75	12m~27m		
				±75	12m~27m		

\* Rated voltage =  $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$

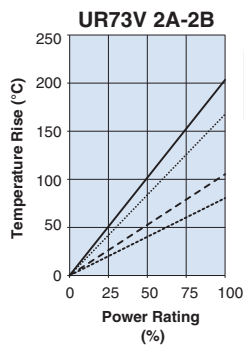
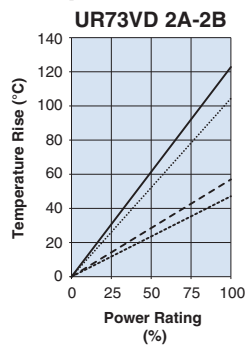
\*\* Please keep the resistor operating according to the derating curve of the terminal part temperature based on the specified power rating.

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.

current sense

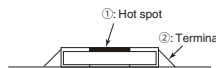
### environmental applications

#### 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.

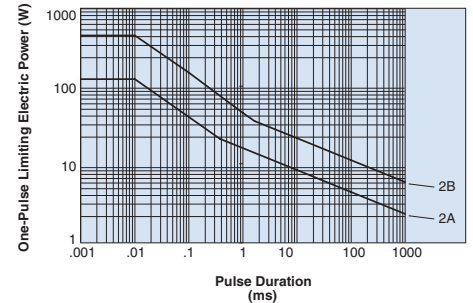
**UR73V**  
Measurement condition  
Room temperature: 25°C  
PCB: FR-4t = 1.6mm  
Cu foil thickness: 35μm



**UR73VD**  
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 contact factory for resistance characteristics of continuous applied pulse.

### 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%	±0.5%	Rated voltage x 2.5 for 5 seconds
Resistance to Solder Heat	±1%	±0.3%	260°C ± 5°C, 10 ± 1 second
Rapid Change of Temperature	±1%	±0.5%	-55°C (30 minutes), +125°C (30 minutes), 100 cycles
Moisture Resistance	±2%	±1%	40°C ± 2°C, 90%~95%RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±2%	±1%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.3%	+155°C, 1000 hours

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3/03/22