

current sensing flat chip resistors (for automotive, low T.C.R.)

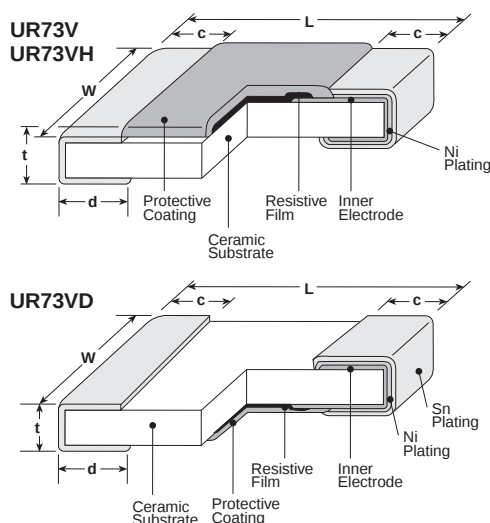


features

- Current detecting resistors for power supplies, motor circuits, etc.
- Low resistance (100mΩ or under) and high accuracy (±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
- Operating temperature range $\sim 155^{\circ}C$
- AEC-Q200 Qualified

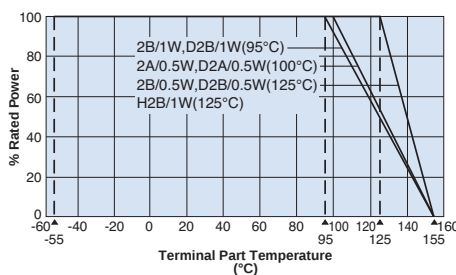
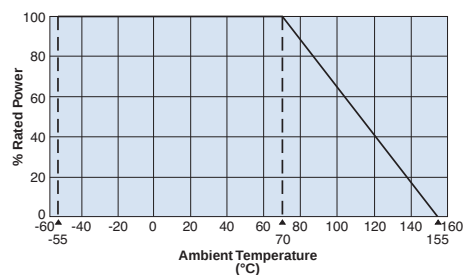
current
sense

dimensions and construction



Size Code	Resistance Range (Ω)	Dimensions inches (mm)				
		L	W	c	d	t
UR73V 2A (0805)	39m~100m	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.016±.008 (0.4±0.2)	.016±.008 (0.4±0.2)	.024±.004 (0.6±0.1)
UR73VD 2A (0805)	10m~16m	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.016±.008 (0.4±0.2)	.028±.008 (0.7±0.2)	.024±.004 (0.6±0.1)
	18m~36m				.024±.008 (0.6±0.2)	
UR73V 2B (1206)	30m~33m			.039±.012 (1.0±0.3)	.016 ^{+.008} _{-.004} (0.4 ^{+.02} _{-.01})	.024±.004 (0.6±0.1)
	36m~39m	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.035±.012 (0.9±0.3)		
	43m~100m			.026±.012 (0.65±0.3)		
UR73VD 2B (1206)	10m~13m				.049±.008 (1.25±0.2)	.024±.004 (0.6±0.1)
	15m~16m	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.016±.012 (0.4±0.3)	.045±.008 (1.15±0.2)	
	18m~20m				.043±.008 (1.1±0.2)	
	22m~27m				.039±.008 (1.0±0.2)	
UR73VH 2B (1206)	100m~1Ω	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.026±.012 (0.65±0.3)	.016 ^{+.008} _{-.004} (0.4 ^{+.02} _{-.01})	.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.

When the terminal part temperature of the resistor exceeds the rated terminal part temperature shown, the power shall be derated according to the 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
Type	Power Rating	Termination Material	Packaging	Nominal Resistance	Tolerance
UR73V UR73VH: High power UR73VD: Face-down	2A: 0.5W 2B: 0.5W 2B: 1W ⁴	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: ±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.

11/05/25

applications and ratings

Part Designation	Power ¹ Rating	Rated Ambient Temperature	Rated Terminal Temperature	T.C.R. (X10 ⁻⁶ /K)	Resistance Range (Ω) E24 & 25m, 50m ^{2,3}	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	0~+250	10m~11m		
				0~+150	12m~13m		
				±75	15m~36m		
UR73V 2B	0.5W	70°C	125°C	±75	33m~75m		
				±100	30m, 82m~100m		
	1W ⁴	70°C	95°C	±75	33m~75m		
UR73VD 2B	0.5W	70°C	125°C	0~+250	10m~11m		
				±75	12m~27m		
	1W ⁴	70°C	95°C	0~+250	10m, 11m		
UR73VD 2B	1W ⁴	70°C	95°C	±75	12m~27m		
				±100	100m~1Ω		

¹ Rated voltage = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$

² 25mΩ and 50mΩ available

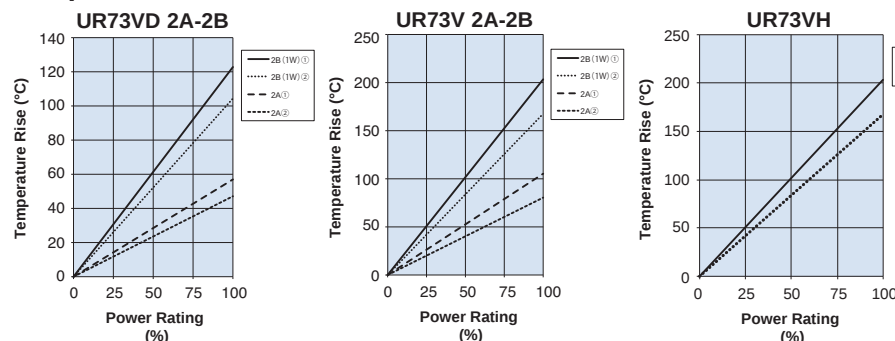
³ E96 is available in UR73VH

⁴ 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.

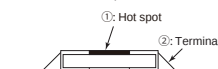
environmental applications

Temperature Rise

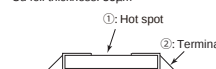


Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

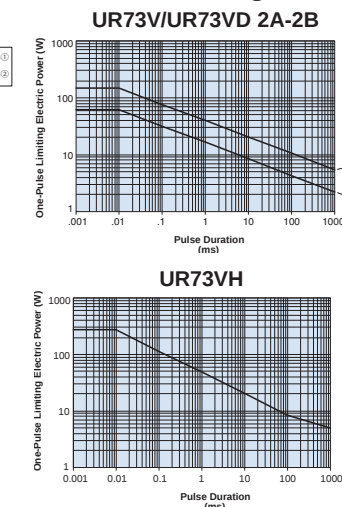
UR73V/UR73VH
Measurement condition
Room temperature: 25°C
PCB: FR-4t = 1.6mm
Cu foil thickness: 35μm



UR73VD
Measurement condition
Room temperature: 25°C
PCB: FR-4t = 1.6mm
Cu foil thickness: 35μm



One-Pulse Limiting Electric Power



Please ask us about the resistance characteristic of continuous applied pulse.

Performance Characteristics

Parameter	Requirement ΔR ±(%+0.005Ω)	Limit	Typical	Test Method
Resistance	Within specified tolerance	—	—	25°C
T.C.R.	Within specified T.C.R.	—	—	UR73V/UR73VD: +25°C/-55°C and +25°C/+125°C UR73VH: +25°C/-55°C and +25°C/+155°C
Overload (Short time)	±2%	±0.5%	—	Rated voltage x 2.5 for 5 seconds (2B: 1W: Rated voltage 2 for 5 seconds)
Resistance to Solder Heat	±1%	±0.3%	—	260°C ± 5°C, 10 ± 1 second
Rapid Change of Temperature	±1%	±0.5%	—	UR73V/UR73VD: -55°C (30 minutes) / +125°C (30 minutes), 100 cycles UR73VH: -55°C (30 minutes) / +155°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 or rated terminal part temperature ±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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