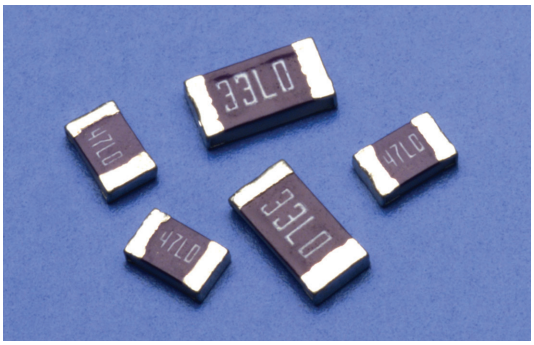
THE DATASHEET OF

UR73D1JTTD10L0F

UR73

low resistance flat chip resistors (low T.C.R.)

EU RoHS COMPLIANT

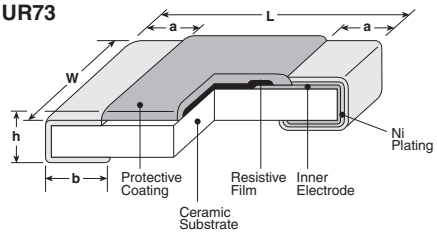


features

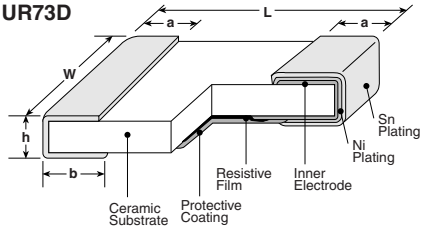
- Current detecting resistors for power supplies, motor circuits, etc.
- Low resistance (100mΩ or under) and high accuracy resistors (±1%) for current detection
- High reliability and performance with T.C.R. ±100×10^{-6}/K
- Products meet EU RoHS requirements

dimensions and construction

UR73

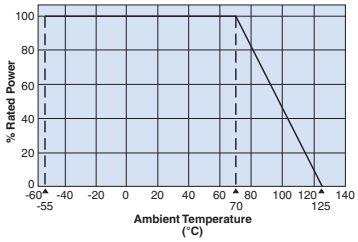


UR73D

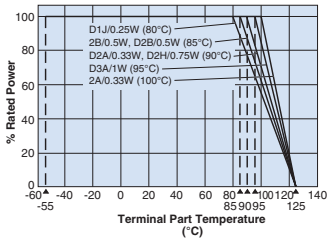


Size Code	Resistance Range (Ω)	Dimensions inches (mm) L	W	h	a	b
D1E (0402)	24m ~ 100m	.039 $^{+.004}_{-.002}$ (1.0 $^{+0.1}_{-0.05}$)	.020 $^{+.004}_{-.002}$ (0.5 $^{+0.1}_{-0.05}$)	.016±.002 (0.4±0.05)	.010±.004 (0.25±0.1)	.012±.004 (0.3±0.1)
D1J (0603)	10m ~ 27m	.063±.008 (1.6±0.2)	.031 $^{+.005}_{-.004}$ (0.8 $^{+0.15}_{-0.1}$)	.02±.004 (0.5±0.1)	.014±.004 (0.35±0.1)	.022±.004 (0.55±0.1)
	30m ~ 100m					.014±.004 (0.35±0.1)
D2A (0805)	10m ~ 16m	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.022±.004 (0.55±0.1)	.016±.008 (0.4±0.2)	.024±.008 (0.6±0.2)
	18m ~ 30m					.02±.008 (0.5±0.2)
2A (0805)	33m ~ 100m	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.02±.004 (0.55±0.1)	.016±.008 (0.4±0.2)	.012 $^{+.008}_{-.004}$ (0.3 $^{+0.2}_{-0.1}$)
D2B (1206)	10m ~ 16m	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.024±.004 (0.6±0.1)	.020±.008 (0.5±0.2)	.039±.008 (1.0±0.2)
	18m ~ 27m					.031±.008 (0.8±0.2)
2B (1206)	30m ~ 100m	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.024±.004 (0.6±0.1)	.020±.012 (0.5±0.3)	.016 $^{+.008}_{-.004}$ (0.4 $^{+0.2}_{-0.1}$)
D2H (2010)	10m ~ 30m	.197±.008 (5.0±0.2)	.098±.008 (2.5±0.2)	.026±.004 (0.65±0.1)	.026±.012 (0.65±0.3)	.063±.012 (1.6±0.3)
	33m ~ 100m					.026±.012 (0.65±0.3)
D3A (2512)	10m ~ 30m	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)	.024±.004 (0.6±0.1)	.031±.012 (0.8±0.3)	.079±.012 (2.0±0.3)
	33m ~ 100m					.031±.012 (0.8±0.3)

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 at a terminal part 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" in the beginning of our catalog prior use.

ordering information

UR73	2A	T	TD	R100	F
Type	**Power Rating**	**Termination Material**	**Packaging**	**Nominal Resistance**	**Tolerance**
UR73 UR73D	1E: 0.125W 1J: 0.25W 2A: 0.33W 2B: 0.5W 2H: 0.75W 3A: 1W	T: Sn	TP: 2mm pitch punch paper (1E) TD: 7" punched paper tape (1J, 2A, 2B) TE: 7" embossed plastic (2H, 3A)	"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.

11/08/23

applications and ratings

Part Designation	Power Rating	Rated Ambient Temperature	Rated Terminal Part Temp.	T.C.R. (ppm/°C) Max.	Resistance Range F (±1%) E-24, 25mΩ, 50mΩ	Operating Temperature Range
UR73D1E	1/8W (.125W)	70°C	—	±100	30mΩ - 100mΩ	-55°C to +125°C
				±500	24mΩ - 27mΩ	
UR73D1J	1/4W (.25W)	70°C	80°C	±100	47mΩ - 100mΩ	
				±200	30mΩ - 43mΩ	
				±300	10mΩ - 27mΩ	
UR73D2A	1/3W (.33W)	70°C	90°C	±250	10mΩ - 30mΩ	
UR732A	1/3W (.33W)	70°C	100°C	±100	47mΩ - 100mΩ	
				±250	33mΩ - 43mΩ	
UR73D2B	1/2W (.5W)	70°C	85°C	±200	10mΩ - 27mΩ	
UR732B	1/2W (.5W)	70°C	85°C	±100	47mΩ - 100mΩ	
				±200	30mΩ - 43mΩ	
UR73D2H	3/4W (.75W)	70°C	90°C	±100	33mΩ - 100mΩ	
				±250	10mΩ - 30mΩ	
UR73D3A	1W (1W)	70°C	95°C	±100	33mΩ - 100mΩ	
				±250	10mΩ - 30mΩ	

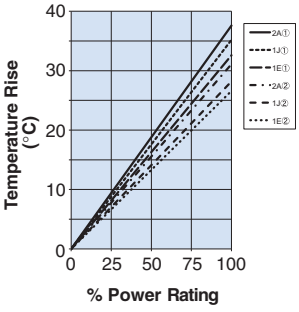
Rated voltage = $\sqrt{P \cdot R}$

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.

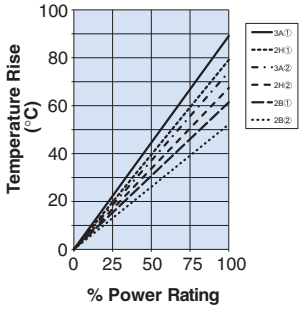
environmental applications

Temperature Rise

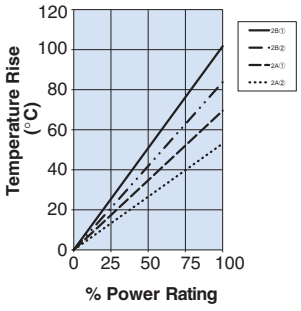
UR73D 1E-2A



UR73D 2B-3A

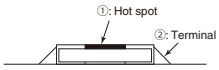


UR73 2A-2B

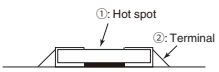


Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

UR73
Measurement condition
Room temperature: 25°C
PCB: FR-4t = 1.6mm
Cu foil thickness: 35μm



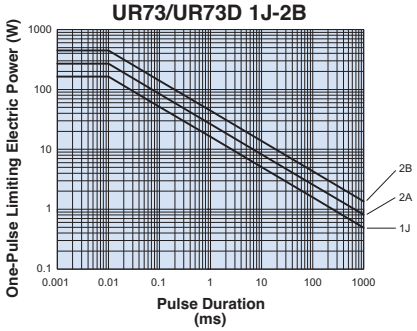
UR73D
Measurement condition
Room temperature: 25°C
PCB: FR-4t = 1.6mm
Cu foil thickness: 35μm



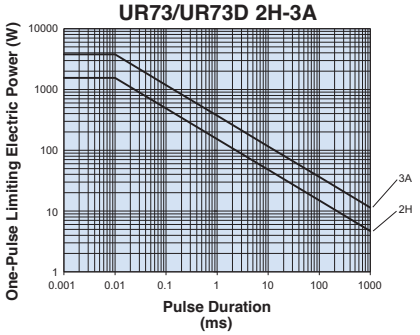
Please ask us about the resistance characteristic of continuous applied pulse

One-Pulse Limiting Electric Power

UR73/UR73D 1J-2B



UR73/UR73D 2H-3A



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%	±0.5%	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 or rated terminal part temperature ±2°C 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.3%	+125°C, 1000 hours

11/08/23