KOA SPEER ELECTRONICS, INC.

RoHS COMPLIANT

spec sheet

SS-258 R6
AHA 6/20/08

Current Sensing Chip Resistor
UR73 Type

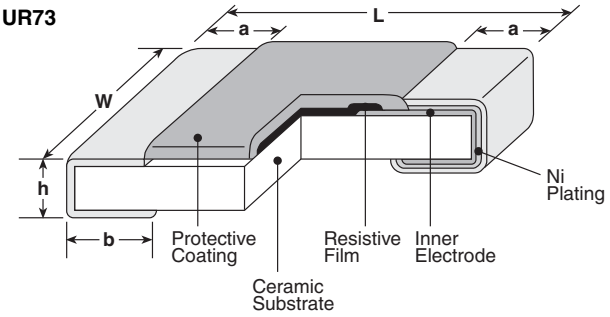
ISO 9001:2000 CERTIFIED
TS-16949 CERTIFIED

1. Features

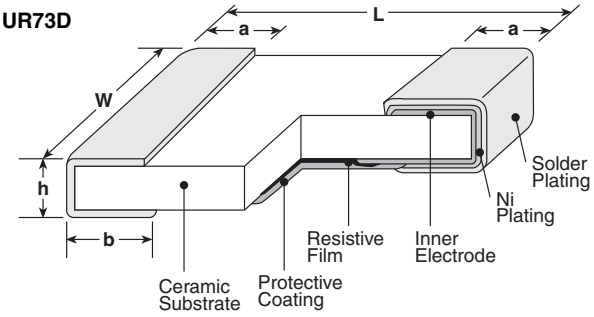
- Very low resistance, high precision reliability
- Suitable for reflow and flow soldering
- Products with lead-free terminations meet RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC
- Utilization of thick film
- Low T.C.R. achieved (±100 ppm/°C)

2. Dimensions

UR73



UR73D



	Size Code	Resistance Range	Dimensions inches (mm) L	W	h	a	b
NEW	D1E	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	10m ~ 27m 30m ~ 100m	.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) .014±.004 (0.35±0.1)
	D2A	10m ~ 16m 18m ~ 30m	.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) .02±.008 (0.5±0.2)
	2A	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	10m ~ 16m 18m ~ 27m	.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) .031±.008 (0.8±0.2)
	2B	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)
NEW	D2H	10m ~ 30m 33m ~ 100m	.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) .026±.012 (0.65±0.3)
	D3A	10m ~ 30m 33m ~ 100m	.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) .031±.012 (0.8±0.3)

3. Type Designation

The type designation shall be in the following form:

UR73	2A	T	TD	R10	F
Type	Size Code	Termination Material	Packaging	Nominal Resistance	Tolerance
UR73 UR73D	1E: 0.125W 1J: 0.2 W 2A: 0.25 W 2B: 0.5 W 2H: 0.75W 3A: 1 W	T: Sn	TP: 2mm pitch punch paper (1E: 10,000 pcs/reel) TD: 7" punched paper tape (1J, 2A, 2B: 5,000 pcs/reel) TE: 7" embossed plastic (2H, 3A: 4,000 pcs/reel)	All values less than 0.1Ω (100mΩ) are expressed in mΩ with "L" as decimal. Ex: 20mΩ = 20L0	F: ±1%

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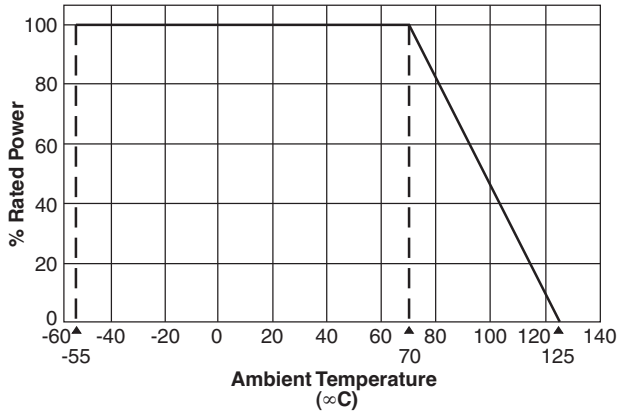
4. Applications & Ratings

	Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Resistance Range F (±1%) E-24, 25mΩ, 50mΩ	Absolute Maximum Working Voltage	Maximum Overload Voltage (5 sec. max.)	Operating Temperature Range
NEW	UR73D1E	1/8W (.125W)	±100	47m - 100mΩ	0.111V	0.279V	-55°C to +125°C
			±500	25mΩ			
	UR73D1J	1/5W (.2W)	±100	47m - 100mΩ	0.141V	0.353V	
			±200	30m - 43mΩ			
			±300	10m - 27mΩ			
	UR73D2A	1/4W (.25W)	±250	10m - 30mΩ	0.086V	0.216V	
	UR732A	1/4W (.25W)	±100	47m - 100mΩ	0.158V	0.395V	
			±250	33m - 43mΩ			
	UR73D2B	1/2W (.5W)	±200	10m - 27mΩ	0.116V	0.290V	
	UR732B	1/4W (.25W) 1/2W (.5W)*	±100	47m - 100mΩ	0.158V	0.395V	
			±250	30m - 43mΩ			
NEW	UR73D2H	3/4W (.75W)	±250	10m - 30mΩ	0.274V	0.685V	
			±100	33m - 100mΩ			
	UR73D3A	1W (1W)	±250	10m - 30mΩ	0.316V	0.791V	
			±100	33m - 100mΩ			

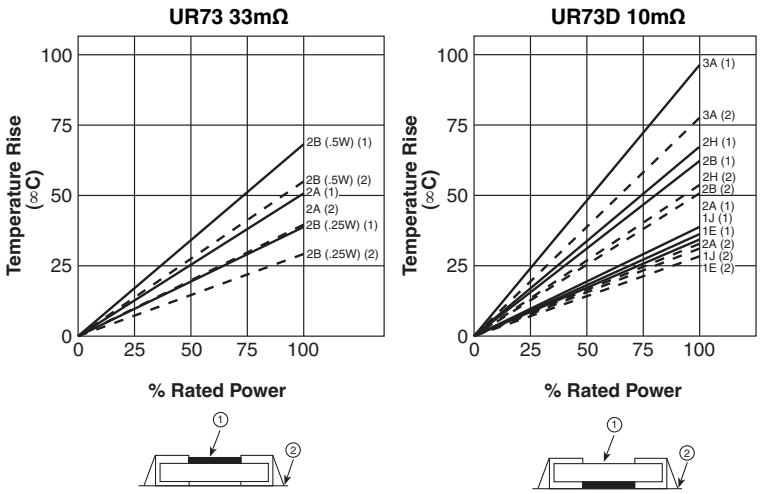
* Please contact factory for Power Rating

5. Environmental Applications

Derating Curve



Surface Temperature Rise - UR73 & UR73D



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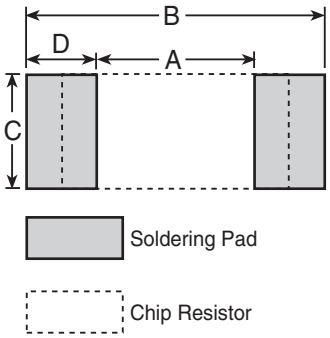
6. Characteristics

Parameter	Requirement Δ R	Test Method
Resistance to Solder Heat	± (1.0% + 0.005Ω)	MIL-R-55342 π 4.7.7, 260°C ± 5°C 10 ± 1 sec.
Solderability	95% coverage minimum	4.17 235°C ± 5°C 2 + 0.5 sec.
Terminal Strength Bend	± (1.0% + 0.005Ω)	5mm min. deflection in either direction for 10 sec.
Vibration	± (0.5% + 0.005Ω)	Each directions (3) for 2 hours
T.C.R.	Within specified	4.8 -55°C/+25°C/125°C
Short Time Overload	± (2.0% + 0.005Ω)	MIL-R-55342 π 4.7.5, 2.5 x RCWV for 5 sec.
Pulse	± (5.0% + 0.005Ω)	2.5 x RCWV, not exceeding maximum overload voltage, 1 sec. ON, 25 sec. OFF, 10,000 cycles
Thermal Shock	± (1.0% + 0.005Ω)	4.19 -40°C (30 min.), +125°C (30 min.), 50 cycles
High Temperature Exposure	± (1.0% + 0.005Ω)	4.23 125°C ± 3°C, 1000 hrs
Moisture Resistance	± (2.0% + 0.005Ω)	4.24 40°C ± 2°C 90 - 95% RH, 1000 hrs
Life	± (2.0% + 0.005Ω	4.25 70°C ± 3°C, 1000 hrs

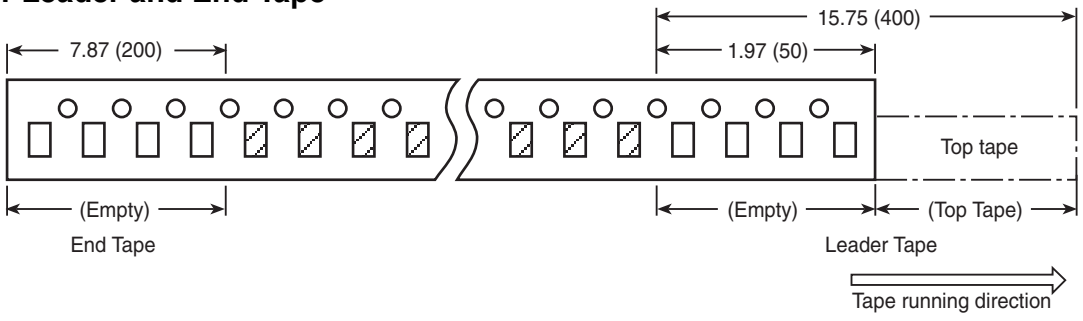
7. Pad Dimensions



Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
UR73	2A	2.0 X 1.25	1.3	3.1	1.25	0.9
	2B	3.2 X 1.6	2.2	4.4	1.6	1.1
UR73D	1E	1.0 X 0.5	0.5	1.8	0.5	0.65
	1J	1.6 X 0.8	0.5	2.5	0.9	1.0
	2A	2.0 X 1.25	0.8	3.4	1.3	1.3
	2B	3.2 X 1.6	1.2	4.6	1.8	1.7
	2H (10m~30mΩ)	5.0 X 2.5	1.8	6.1	2.6	2.5
	2H (33m~100mΩ)	5.0 X 2.5	3.3	6.1	2.5	1.4
	3A (10m~30mΩ)	6.4 X 3.2	2.3	8.0	3.3	1.7
	3A (33m~100mΩ)	6.4 X 3.2	4.6	8.0	3.0	1.7

8. Packaging Specifications

8.1 Leader and End Tape



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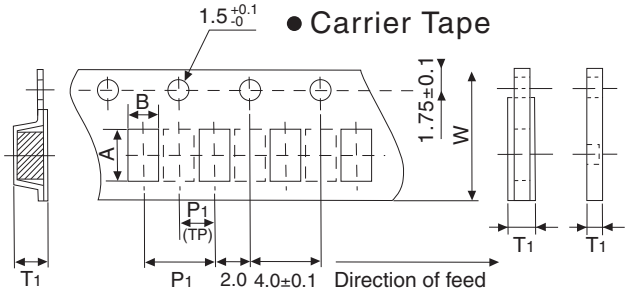
8. Packaging Specifications (Continued)

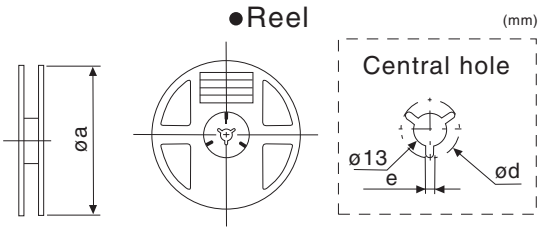
8.2 Dimensions of Punched Paper Tape



Type		Component Size (mm)			Carrier Tape	Quantity/ Reel (Pieces)	Taping (mm)					Reel Size
		L	W	T			A	B	W	P1	T1	
UR73 UR73D	1E	1	0.5	0.35	TP	10000	1.15±0.1	0.65±0.1	8.0±0.2	2±0.05	0.45+0.2/-0	178
	1J	1.6	0.8	0.45	TP	10000	1.9±0.1	1.1±0.1	8.0±0.2	2±0.05	0.6+0.2/-0	178
					TD	5000	1.9±0.1	1.1±0.08	8.0±0.2	4.0±0.1	0.6+0.2/-0	178
					TP	10000	2.4±0.2	1.65±0.2	8.0±0.2	2±0.05	0.75+0.2/-0	178
	2A	2	1.25	0.5	TD	5000	2.4±0.2	1.65±0.2	8.0±0.2	4.0±0.1	0.75+0.2/-0	178
					TE	4000	2.4±0.2	1.6±0.2	8.0±0.2	4.0±0.1	0.9±0.1	178
	2B	3.2	1.6	0.6	TD	5000	3.5±0.2	2±0.2	8.0±0.2	4.0±0.1	0.75+0.2/-0	178
					TE	4000	3.5±0.2	1.9±0.2	8.0±0.2	4.0±0.1	1.0±0.1	178
	2H	5	2.5	0.6	TE	4000	5.35±0.2	2.9±0.2	12.0±0.1	4.0±0.1	1.0±0.15	178
	3A	6.3	3.1	0.6	TE	4000	6.65±0.2	3.44±0.2	12.0±0.1	4.0±0.1	1.0±0.15	178

(Notes) Dotted lines are applicable to only "TP" and "TB."

8.3 Reel specifications for taping



(Notes) Reel holes, shapes and design are examples

Type	ød (mm)	e (mm)
UR73, UR73D	21	2

9. Lot Number (8 digits)

53	12	3001
Production Year, Month	Date	Additional Day Number

41 ~ **52**	January 2006 ~ December 2006
53 ~ **64**	January 2007 ~ December 2007

10. Marking & Coating Color

Type	Tolerance	Coating	Marking Color
UR73 UR73D	F (±1%)	Indigo	white / 4 digit

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