ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UR series — Chip Type, High CV

For SMD | Smaller | Anti-Solvent Feature

- Chip type, higher capacitance in larger case sizes.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.

UG ← Extended range — **UR** — Higher C/V → **WX**

■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 ~ +85°C
Rated Voltage Range	4 ~ 100V
Rated Capacitance Range	3.3 ~ 1500μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV (μA) .
tan δ	Measurement frequency : 120Hz, Temperature : 20°C

Rated voltage (V)	4	6.3	10	16	25	35	50	63	100
tan δ (MAX.)	0.35	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.12

Stability at Low Temperature — Measurement frequency: 120Hz

Rated voltage (V)		4	6.3	10	16	25	35	50	63	100
Impedance ratio ZT / Z20 (MAX.)	Z−25°C / Z+20°C	7	5	4	3	2	2	2	2	2
	Z−40°C / Z+20°C	15	10	8	6	4	3	3	3	3

Endurance

After 2000 hours' application of rated voltage at 85°C, capacitors meet the characteristic requirements listed at right.

Capacitance change	Within ±20% of initial value
tan δ	200% or less of initial specified value
Leakage current	Initial specified value or less

Shelf Life

After leaving capacitors under no load at 85°C for 1000 hours, they meet the specified value for endurance characteristics listed above.

Resistance to soldering heat

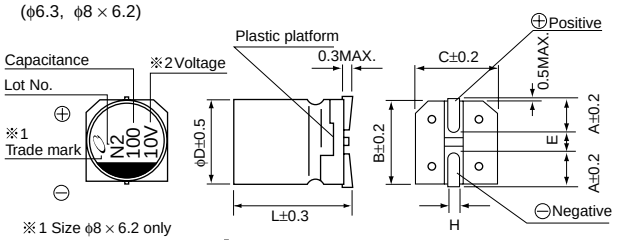
The capacitors shall be kept on the hot plate maintained at 250°C, for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed at right.

Capacitance change	Within ±10% of initial value
tan δ	Initial specified value or less
Leakage current	Initial specified value or less

Marking — Black print on the case top.

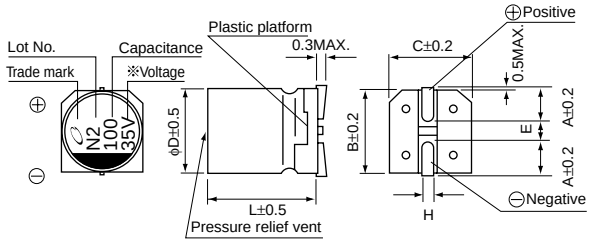
■Chip Type

(φ6.3, φ8 × 6.2)



※1 Size φ8 × 6.2 only
※2 Voltage mark for 6.3V is 「6V」.
In case of marking for φ3 units, "V" for rated voltage is omitted.

(φ8 × 10, φ10 × 10)



Type numbering system (Example : 10V 100μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	U	R	1	A	1	0	1	M	C	R	1	G	S

- 1–3: Type
- 4–5: Series name
- 6–8: Rated voltage (10V)
- 9: Rated Capacitance (100μF)
- 10: Capacitance tolerance (±20%)
- 11–12: Configuration
- 13: Size code
- 14: Package code

φD × L	Code
6.3 × 5.8	CR
6.3 × 7.7	CR
8 × 6.2	CR
8 × 10	NR
10 × 10	NR

- The lead-free product is also available upon request.
  In this case, L will be put at 11th digit of type numbering system.
  Size φ8 × 6.2, CL will be put at 10th and 11th digit of type numbering system.

(mm)

φD × L	6.3 × 5.8	6.3 × 7.7	8 × 6.2	8 × 10	10 × 10
A	2.4	2.4	3.3	2.9	3.2
B	6.6	6.6	8.3	8.3	10.3
C	6.6	6.6	8.3	8.3	10.3
E	2.2	2.2	2.3	3.1	4.5
L	5.8	7.7	6.2	10	10
H	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.8 ~ 1.1	0.8 ~ 1.1

● Dimension table in next page.

UR series

■Dimensions

φD × L (mm)

Cap.(μF) \ V / Code	4		6.3		10		16		25		35		50		63		100	
	0G		0J		1A		1C		1E		1V		1H		1J		2A	
3.3	3R3																6.3×5.8	29
4.7	4R7														6.3×5.8	31	● 8×6.2	40 (35)
10	100														8×6.2	46	8×10	77
22	220												6.3×5.8	45	8×10	96	8×10	100
33	330										6.3×5.8	55	○ 8×6.2	95 (94)	8×10	117	10×10	130
47	470								6.3×5.8	65	● 8×6.2	105 (94)	○ 8×10	140 (105)	8×10	140	10×10	155
100	101				6.3×5.8	70	8×6.2	125	○ 8×6.2	145 (143)	○ 8×10	175 (132)	■10×10	195 (181)	10×10	232		
150	151				6.3×5.8	85	6.3×7.7	151	8×10	192	8×10	214	10×10	238				
220	221			● 8×6.2	160 (143)	○ 8×6.2	175 (173)	○ 8×10	215 (162)	■10×10	250 (232)	■10×10	265 (246)	10×10	289			
330	331	6.3×5.8	152	○ 8×6.2	190 (188)	8×10	240	8×10	270	■10×10	305 (284)	10×10	324					
470	471	6.3×7.7	200	8×10	265	8×10	290	■10×10	330 (307)	10×10	393							
680	681	8×10	284	8×10	318	10×10	374	10×10	396									
1000	102	8×10	344	■10×10	400 (372)	10×10	454										Case size	Rated ripple
1500	152	10×10	347	10×10	489													

Rated Ripple (mA rms) at 85°C 120Hz

Size φ6.3 × 5.8 is available for capacitors marked. " ●"
Size φ6.3 × 7.7 is available for capacitors marked. " ○"
Size φ8 × 10 is available for capacitors marked. " ■"
※ In this case, 6 will be put at 12th digit of type numbering system.

●Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz~
~ 47	0.80	1.00	1.15	1.40	1.67
100 ~ 1500	0.85	1.00	1.08	1.20	1.30

- Taping specifications are given in page 22.
- Recommended land size are given in page 23
- Please refer to page 3 for the minimum order quantity.