ALUMINUM ELECTROLYTIC CAPACITORS

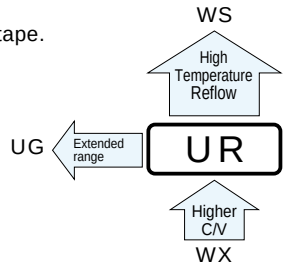
nichicon

UR

Chip Type, High CV series

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 fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC).



■Specifications

Item	Performance Characteristics
Category Temperature Range	–40 to +85°C
Rated Voltage Range	4 to 100V
Rated Capacitance Range	3.3 to 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) .
Tangent of loss angle (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 — The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C.

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life — After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

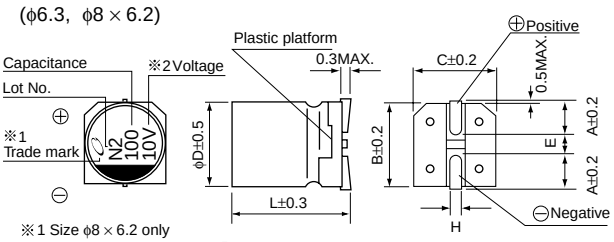
Resistance to soldering heat — The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking — Black print on the case top.

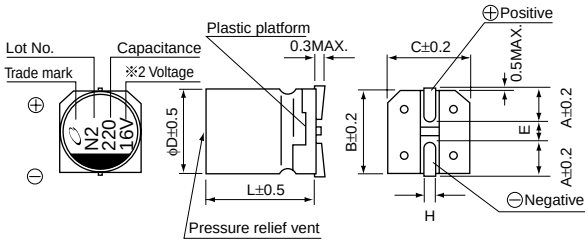
■Chip Type

(φ6.3, φ8 × 6.2)



※1 Size φ8 × 6.2 only
※2 Voltage mark for 6.3V is「6V」.

(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	L	1	G	S

- Package code
- Size code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (100μF)
- Rated voltage (10V)
- Series name
- Type

φD × L	Code
6.3 × 5.8	CL
6.3 × 7.7	CL
8 × 6.2	CL
8 × 10	NL
10 × 10	NL

(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 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Dimension table in next page.

UR series

■Dimensions

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 φD × L (mm)	Rated ripple
1500	152	10×10	347	10×10	489														

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.

Rated ripple current (mArms) at 85°C 120Hz

●Frequency coefficient of rated ripple current

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

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UG(p.100) series if high CV products are required.
- Please refer to page 3 for the minimum order quantity.