

# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

**UR** Chip type, High Reliability Series

IEI Low ESR LL Long Life S Solvent Proof WV ≤ 100V

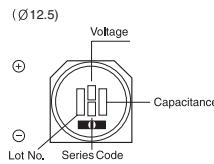
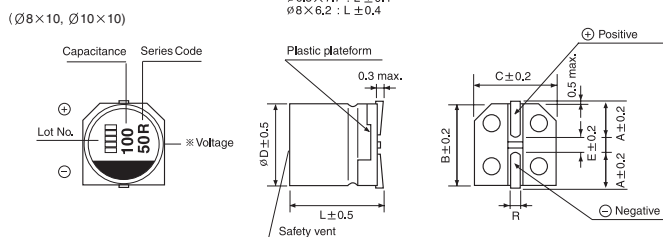
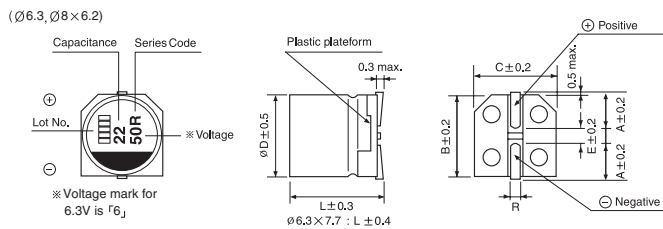
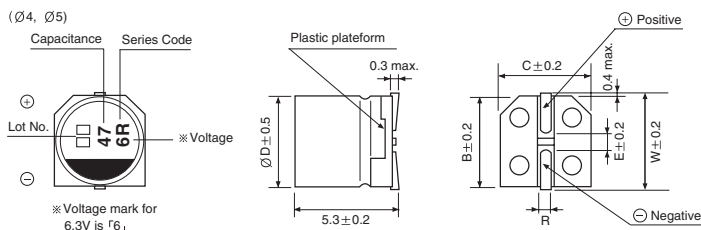


- Chip type, high temperature range, for 125°C use
- Lower ESR than UC series
- Designed for surface mounting on high density PC board
- Applicable to automatic insertion machine using carrier tape
- Application to automotive system
- Complied to the RoHS directive

Item	Characteristics								
Operating temperature range	-40 ~ +125°C								
Leakage current max.	WV ≤ 100				WV ≥ 160				
	I = 0.01CV or 3μA whichever is greater (after 2 minutes)				I = 0.04CV + 100μA (after 2 minutes)				
Capacitance tolerance	±20% at 120Hz, 20°C								
Dissipation factor max. (at 120Hz, 20°C)	WV	10	16	25	35	50 ~ 80	100	160 ~ 250	400
	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.20	0.24
Temperature characteristics (Impedance ratio at 120Hz)	WV	10	16	25	35 ~ 100	160 ~ 250	400		
	Z-25°C/Z+20°C	3	2	2	2	3	6		
	Z-40°C/Z+20°C	4	3	3	3	6	10		
Load life (after application of the rated voltage for 5000 hours at 125°C)	Leakage current		Less than specified value						
	Capacitance change		Within ±30% of initial value						
	tanδ		Less than 300% of specified value						
	∅D	~ 80V	100V	160V ~					
	∅D = 4, 5, 6.3	1000 hours	-	-					
	8×6.2	3000 hours	-	-					
Shelf life (at 125°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384-4								
	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 10 seconds.								
Resistance to soldering heat	Leakage current		Less than specified value						
	Capacitance change		Within ±10% of initial value						
	tanδ		Less than specified value						

● DRAWING - Series code of UR is "R"

Unit : mm



∅D×L	W	A	B	C	E	R
4×5.3	4.8		4.3	4.3	1.0	0.5~0.8
5×5.3	5.8		5.3	5.3	1.4	0.5~0.8
6.3×5.3		2.4	6.6	6.6	2.2	0.5~0.8
6.3×5.8		2.4	6.6	6.6	2.2	0.5~0.8
6.3×7.7		2.4	6.6	6.6	2.2	0.5~0.8
8×6.2		3.3	8.3	8.3	2.3	0.5~0.8
8×10		2.9	8.3	8.3	3.1	0.8~1.1
10×10		3.2	10.3	10.3	4.5	0.8~1.1
12.5×13.5		4.6	12.8	12.8	4.5	0.8~1.4

CHIP TYPES

# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

## UR series

### ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

$\mu\text{F}$ \diagdown WV	10			16			25			35		
10				4×5.3	7.00	12	5×5.3	3.30	23	6.3×5.8	1.60	69
22	5×5.3	3.30	23	5×5.3	3.30	23	6.3×5.3	2.00	40	6.3×5.8	1.60	69
33	5×5.3	3.30	23	6.3×5.3	2.00	40	6.3×5.8	1.60	69	8×6.2	0.90	110
47	6.3×5.3	2.00	40	6.3×5.8	1.60	69	8×6.2	0.90	110	8×10	0.30	264
100	8×6.2	0.90	110	8×6.2	0.90	110	8×10	0.30	264	8×10	0.30	264
220	8×10	0.30	264	8×10	0.30	355	8×10	0.30	355	10×10	0.20	400
330	8×10	0.30	355	10×10	0.20	400	10×10	0.20	400	12.5×13.5	0.14	750
							12.5×13.5	0.14	750			
470	10×10	0.20	400	12.5×13.5	0.14	750						

$\mu\text{F}$ \diagdown WV	50			63			80			100		
10	6.3×5.8	2.80	51	8×6.2	2.00	60	8×10	1.20	70	8×10	1.60	70
22	8×6.2	1.60	83	8×10	1.00	70	10×10	0.80	115	10×10	1.60	95
33	8×10	0.70	192	10×10	0.55	115	10×10	0.55	115	10×10	0.80	115
47	10×10	0.50	330	10×10	0.55	115	12.5×13.5	0.40	450	12.5×13.5	0.40	450
100	10×10	0.50	330	12.5×13.5	0.33	450	12.5×13.5	0.33	450	12.5×13.5	0.33	450
220	12.5×13.5	0.23	550									
330												
470												

Ripple current (mA rms) at 125°C, 100kHz  
 ESR ( $\Omega$ ) at 20°C, 100kHz  
 Case size  $\varnothing D \times L$  (mm)

$\mu\text{F}$ \diagdown WV	160		200		250		400	
1							10×10	18
2.2							10×10	26
3.3							10×10	37
4.7					12.5×13.5	70	12.5×13.5	70
10	12.5×13.5	100	12.5×13.5	100	12.5×13.5	100		
22	12.5×13.5	120	12.5×13.5	120				

Ripple current (mA rms) at 125°C, 120Hz  
 Case size  $\varnothing D \times L$  (mm)

### ● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Frequency		120Hz	1kHz	10kHz	100kHz
wv	cap.				
≤ 100	~ 10	0.66	0.86	0.93	1.00
	22 ~	0.93	0.97	1.00	1.00
160 ≤	-	1.00	1.50	1.75	1.80

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