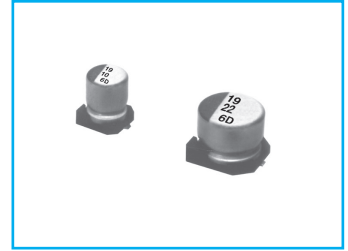


# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS



Upgrade

## CD Chip type, Extremely Low Impedance Series



- Chip type, low impedance temperature range up to 105°C
- Designed for surface mounting on high density PC board
- Applicable to automatic insertion machine using carrier tape
- Complied to the RoHS directive



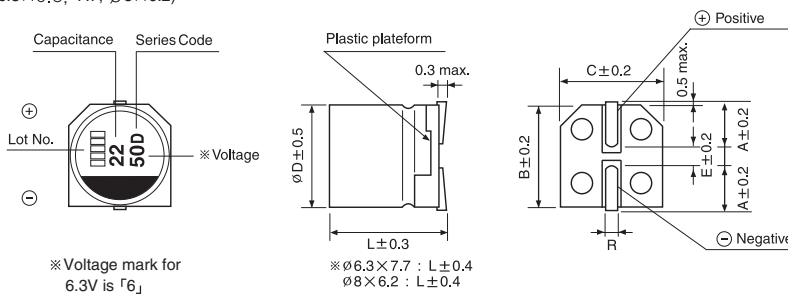
Item	Characteristics									
Operating temperature range	-55 ~ +105°C									
Leakage current max.	$I = 0.01CV$ or $3\mu A$ whichever is greater (after 2 minutes)									
Capacitance tolerance	$\pm 20\%$ at 120Hz, 20°C									
Dissipation factor max. (at 120Hz, 20°C)	WV	6.3	10	16	25	35	50	63	80	100
	tan $\delta$	0.24	0.19	0.16	0.14	0.12	0.12	0.10	0.10	0.10
Low temperature characteristics (Impedance ratio at 120Hz)	WV	6.3	10	16	25	35	50	63 ~ 100		
	Z-25°C/Z+20°C	2	2	2	2	2	2	3		
	Z-55°C/Z+20°C	3	3	3	3	3	3	4		
Load life (after application of the rated voltage for 2000 hours at 105°C)	Leakage current	Less than specified value								
	Capacitance change	Within $\pm 25\%$ of initial value								
	tan $\delta$	Less than 200% of specified value								
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tan $\delta$ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4									
Resistance to soldering heat	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 10 seconds.									
	Leakage current	Less than specified value								
	Capacitance change	Within $\pm 10\%$ of initial value								
	tan $\delta$	Less than specified value								

### DRAWING

Unit : mm

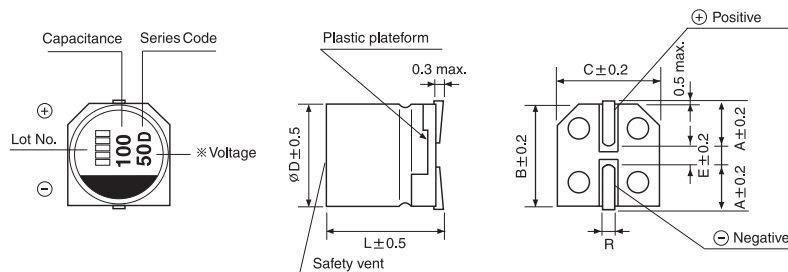
-Series code of CD is "D"

( $\phi 6.3 \times 5.8$ , 7.7,  $\phi 8 \times 6.2$ )



$\phi D$	A	B	C	E	R
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	1.3~1.6

( $\phi 8 \times 10$ ,  $\phi 10 \times 10$ )



CHIP TYPES

# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

**CD** series

## ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

$\mu\text{F}$ \diagdown WV	6.3			10			16			25			35			50		
10																6.3×5.8	0.92	170
15																6.3×5.8	0.79	170
22																6.3×5.8	0.79	170
33							6.3×5.8	0.39	384	6.3×5.8	0.39	384	6.3×5.8	0.43	384	6.3×7.7	0.61	280
																8×6.2	0.58	300
47				6.3×5.8	0.36	384	5×5.3	1.00	160	6.3×5.8	0.39	384	6.3×5.3	0.70	240	6.3×7.7	0.61	280
							6.3×5.8	0.39	384	6.3×5.8	0.39	384	6.3×5.8	0.43	384	8×6.2	0.58	300
68	6.3×5.8	0.40	384	6.3×5.8	0.36	384	6.3×5.8	0.36	384	6.3×5.8	0.36	384	6.3×7.7	0.29	600	8×10	0.29	450
100	6.3×5.3	0.39	250	6.3×5.8	0.36	384	6.3×5.3	0.70	220	6.3×7.7	0.29	600	6.3×7.7	0.29	600	8×10	0.29	450
	6.3×5.8	0.40	384				6.3×5.8	0.36	384	8×6.2	0.24	500	8×10	0.15	960	10×10	0.18	700
150	6.3×5.8	0.40	384	6.3×5.8	0.36	384	6.3×5.8	0.36	384	8×10	0.15	960	8×10	0.15	960	10×10	0.18	700
							6.3×7.7	0.29	600									
220	6.3×5.8	0.40	384	6.3×7.7	0.32	600	6.3×7.7	0.29	600	6.3×7.7	0.29	600	8×10	0.15	960	10×10	0.18	700
				8×6.2	0.24	500	8×6.2	0.24	500	8×10	0.15	960	10×10	0.09	1360			
330	6.3×7.7	0.29	600	8×10	0.15	960	8×10	0.15	960	8×10	0.15	960	8×10	0.10	960	10×10	0.16	850
	8×6.2	0.24	500				10×10	0.10	960	10×10	0.09	1360	10×10	0.09	1360			
470	8×10	0.15	960	6.3×7.7	0.16	600	8×10	0.16	960	8×10	0.15	960	10×10	0.09	1360			
				8×10	0.15	960	10×10	0.07	1360	10×10	0.09	1360						
560	8×10	0.15	960	8×10	0.15	960	10×10	0.07	1360	10×10	0.09	1360	10×10	0.06	1360			
680	8×10	0.15	960	8×10	0.15	960	10×10	0.08	1360	10×10	0.09	1360	10×10	0.06	1360			
				10×10	0.07	1360												
820	8×10	0.15	960	10×10	0.08	1360				10×10	0.09	1360						
1000	8×10	0.15	960	10×10	0.08	1360				12.5×13.5	0.09	1360						
	10×10	0.07	1360															
1500	10×10	0.07	1360															

$\mu\text{F}$ \diagdown WV	63			80			100		
10	6.3×5.8	2.30	80	6.3×7.7	2.16	60			
22	6.3×7.7	1.90	120	8×10	1.17	130	8×10	1.80	130
33	8×10	0.80	250	8×10	1.17	130	10×10	1.35	200
47	8×10	0.80	250	10×10	1.08	200	12.5×13.5	0.90	500
68	10×10	0.70	400	12.5×13.5	0.70	500	12.5×13.5	0.90	500
100	10×10	0.70	400	12.5×13.5	0.70	500			
150	12.5×13.5	0.54	800	12.5×13.5	0.70	500			
220	12.5×13.5	0.54	800						

↑ Ripple current (mA rms) at 105°C, 100kHz  
 ↑ Impedance ( $\Omega$ ) at 20°C, 100kHz  
 ↑ Case size  $\varnothing D \times L$  (mm)

## ● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz $\leq$
Coefficient	0.35	0.50	0.64	0.83	1.00