

ORGANIC CONDUCTIVE POLYMER CAPACITORS

- CCV SERIES -

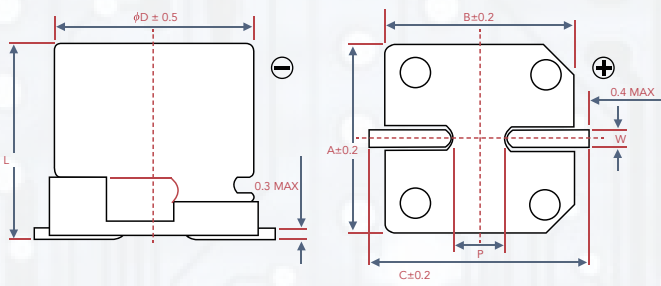
FEATURES

- 105°C, 2,000 hours assured
- Ultra low ESR, solid capacitors of SMD type
- RoHS Compliance



CONSTRUCTION AND DIMENSIONS

LEAD SPACING AND DIAMETER



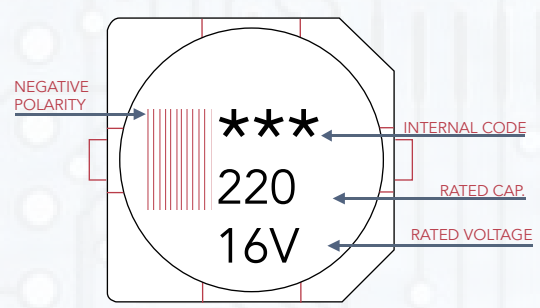
UNIT : MM

∅D	L	A	B	C	W	P±0.2
5	5.7 ± 0.3	5.3	5.3	5.9	0.5-0.8	1.5
6.3	5.9 +0.1/-0.3	6.6	6.6	7.2	0.5-0.8	2.0
6.3	7.0 ± 0.2	6.6	6.6	7.2	0.5-0.8	2.0
8	6.7 ± 0.3	8.4	8.4	9.0	0.7-1.1	3.1
8	12.0 ± 0.5	8.4	8.4	9.0	0.7-1.1	3.1
10	7.7 ± 0.3	10.4	10.4	11.0	0.7-1.3	4.7
10	9.9 +0.1/-0.3	10.4	10.4	11.0	0.7-1.3	4.7
10	12.7 ± 0.5	10.4	10.4	11.0	0.7-1.3	4.7

PART NUMBERS

CCV	1C	220	M	4x5.7	R	
SERIES NAME	RATED VOLTAGE	CAPACITANCE	TOLERANCE	CASE SIZE	PACKAGE TYPE	
Series is represented by a three/four digit code	OE - 2.5V OG - 4V OJ - 6.3V 1A - 10V 1C - 16V 1E - 25V 1V - 35V 1H - 50V	1J - 63V 1K - 80V 2A - 100V 2C - 160V 2D - 200V 2E - 250V 2G - 400V 2W - 450V	0R1 - 0.1µF 4R7 - 4.7µF 1R0 - 1µF 4R7 - 4.7µF 100 - 10µF 470 - 47µF 101 - 100µF 471 - 470µF 102 - 1000µF	M: -20% ~+20%	3x5.3 8x7.0 4x5.3 8x10.0 4x5.7 8x12.0 5x5.3 10x7.7 5x5.7 10x8.0 6.3x5.3 10x9.9 6.3x5.7 10x10.0 6.3x5.9 10x12.7 6.3x6.0 10x13.0 6.3x7.0 12.5x13.5 6.3x7.7 12.5x16.0 8x6.5 16x16.5 8x6.7	R - Tape and reel

MARKING



SPECIFICATIONS

ITEMS	PERFORMANCE				
Category Temperature Range	-55°C ~ +105°C				
Capacitance Tolerance	±20% (at 120Hz, 20°C)				
Leakage Current (at 20°C)	Rated voltage applied, after 2 minutes at 20°C. See Standard Ratings				
Tan δ at 120Hz, 20°C	See Standard Ratings				
ESR (at 100k ~ 300k Hz, 20°C)	See Standard Ratings				
Endurance	TEST TIME	2,000 Hrs			
	CAPACITANCE CHANGE	Within ±20% of initial value			
	TAN δ	Less than 150% of specified value			
	ESR	Less than 150% of specified value			
	LEAKAGE CURRENT	Within specified value			
*The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 2,000 hrs at 105°C.					
Moisture Resistance	TEST TIME	1,000 Hrs			
	CAPACITANCE CHANGE	Within ±20% of initial value			
	TAN δ	Less than 150% of specified value			
	ESR	Less than 150% of specified value			
	LEAKAGE CURRENT	Within specified value			
The above Specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 to 95% RH for 1,000 hours. eakage current should be tested after voltage treatment.					
Resistance to Soldering Heat* Please refer to page 22 for reflow-soldering conditions	CAPACITANCE CHANGE	Within ±10% of initial value			
	TAN δ	Less than 130% of specified value			
	ESR	Less than 130% of specified value			
	LEAKAGE CURRENT	Within specified value			
Ripple Current & Frequency Multipliers	FREQUENCY (Hz)	120 ≤ f < 1k	1k ≤ f < 10k	10k ≤ f < 100k	100k ≤ f < 500k
	MULTIPLIER	0.05	0.3	0.7	1.0

*For any doubt about measured values, measures the leakage current again after the following voltage treatment.
Voltage treatment: Applying DC rated voltage tot he capacitors for 2 hours at 105°C.



STANDARD RATINGS

Dimension: ØDxL (mm)
Ripple Current: mA/rms at 100k Hz, 105°C

W. V. (V)	SURGE VOLTAGE (V)	CAPACITANCE (µF)	SIZE ØDxL (mm)	TAN δ (120Hz, 20°C)	L C (µA)	ESR (MΩ/AT 100K~300K HZ, 20°C MAX)	RATED R.C. (mA/rms at 100k Hz, 105°C)
2.5V (0E)	2.8	220	6.3 x 5.9	0.12	110	25	2,500
		560	8 x 6.7	0.12	280	23	3,100
		680	8 x 12	0.18	340	12	4,770
		1,000	10 x 7.7	0.12	500	19	4,240
		1,200	10 x 9.9	0.18	750	13	5,200
		1,500	10 x 12.7	0.18	750	10	5,500
4V (0G)	4.6	150	5 x 5.7	0.12	120	30	1,490
		150	6.3 x 5.9	0.12	120	26	2,450
		220	8 x 6.7	0.12	176	25	3,020
		330	8 x 6.7	0.12	264	25	3,020
		470	10 x 7.7	0.12	376	20	4,130
		560	8 x 12	0.18	448	12	4,770
		680	10 x 7.7	0.12	544	20	4,130
		820	10 x 9.9	0.18	656	13	5,200
		1,200	10 x 12.7	0.18	960	10	5,500
6.3V (0J)	7.2	82	6.3 x 5.9	0.12	103	27	2,400
		100	5 x 5.7	0.12	126	35	1,380
			6.3 x 5.9	0.12	126	27	2,400
		120	6.3 x 7	0.12	151	30	2,010
		150	6.3 x 7	0.12	189	30	2,250
			8 x 6.7	0.12	189	25	3,020
		220	6.3 x 7	0.12	277	30	2,250
			8 x 6.7	0.12	277	25	3,020
		330	10 x 7.7	0.12	416	20	4,130
		470	8 x 12	0.15	592	12	4,770
		560	10 x 9.9	0.15	706	16	4,700
820	10 x 12.7	0.15	1,033	10	5,500		
10V (1A)	11.5	47	5 x 5.7	0.12	94	40	1,270
		56	6.3 x 5.9	0.10	112	31	2,250
		150	8 x 6.7	0.10	300	27	2,800
		330	8 x 12	0.15	660	14	4,420
			10 x 7.7	0.10	660	24	3,770
		470	10 x 9.9	0.15	940	18	4,400
		560	10 x 12.7	0.15	1,120	12	5,300



STANDARD RATINGS

Dimension: DxL (mm)
Ripple Current: mA/rms at 100k Hz, 105°C

W. V. (V)	SURGE VOLTAGE (V)	CAPACITANCE (μ F)	SIZE \varnothing DxL (mm)	TAN δ (120Hz, 20°C)	L C (μ A)	ESR (M Ω /AT 100K~300K HZ, 20°C MAX)	RATED R.C. (mA/rms at 100k Hz, 105°C)
16V (1C)	18.4	22	5 x 5.7	0.12	70	45	1,210
		47	6.3 x 5.9	0.10	150	50	1,650
		82	8 x 6.7	0.10	262	30	2,700
		180	8 X 12	0.15	576	16	4,360
			10 x 7.7	0.10	576	26	3,430
		220	10 x 9.9	0.15	704	20	4,200
		330	10 x 12.7	0.15	792	14	5,050
820	10 x 12.7	0.12	2,624	18	4,200		
20V (1D)	23.0	22	6.3 X 5.9	0.10	88	50	1,650
		47	8 x 6.7	0.10	188	45	2,000
		82	10 x 7.7	0.10	328	40	2,500
		100	8 x 12	0.15	400	24	3,320
			10 x 9.9	0.15	400	25	3,700
		150	10 x 12.7	0.15	600	20	4,320
		330	10 x 12.7	0.12	1,320	26	2,700
25V (1E)	28.7	6.8	6.3 x 5.9	0.10	170	80	1,200
		10	8 x 6.7	0.10	125	60	1,500
		22	10 x 7.7	0.10	275	50	2,000
		33	8 x 12	0.12	413	30	2,980
		56	10 x 12.7	0.12	700	28	3,800
		270	10 x 12.7	0.12	1,350	27	2,700
35V (1V)	40.0	39	8 x 12	0.12	273	31	2,100
		68	10 x 12.7	0.12	476	28	2,700

