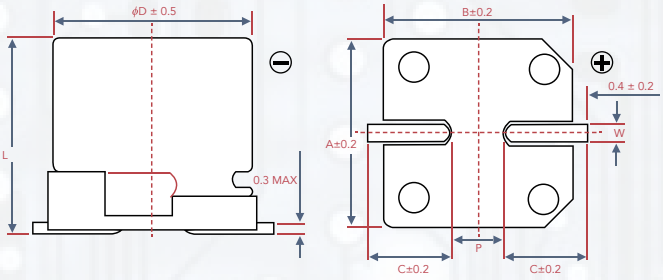
ORGANIC CONDUCTIVE POLYMER CAPACITORS
- CCVZ SERIES -

FEATURES

- 105°C, 2000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance

CONSTRUCTION AND DIMENSIONS



LEAD SPACING AND DIAMETER

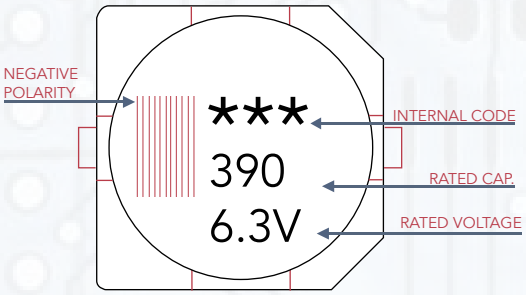
UNIT : MM

ØD	L	A	B	C	W	P±0.2
6.3	5.8 +0.1/-0.3	6.6	6.6	2.7	0.5~0.8	2.0
8	7.0 ± 0.2	8.4	8.4	3.0	0.5~0.8	3.1
8	12.0 ± 0.5	8.4	8.4	3.0	0.7~1.1	3.1
10	8.0 ± 0.2	10.4	10.4	3.3	0.7~1.1	4.7
10	12.7 ± 0.5	10.4	10.4	3.3	0.7~1.1	4.7

PART NUMBERS

CCVZ	1C	220	M	10 x 8	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	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



Cal-Chip Electronics Inc.
59 Steamwhistle Drive, Ivyland, PA 18974 | p. 215.942.8900 | www.calchip.com | quotes@calchip.com

SPECIFICATIONS

<table>
<tr><th>ITEMS</th><th>PERFORMANCE</th></tr>
<tr><td>Category Temperature Range</td><td>-55°C ~ +105°C</td></tr>
<tr><td>Capacitance Tolerance</td><td>±20% (at 120Hz, 20°C)</td></tr>
<tr><td>Leakage Current (at 20°C)</td><td>Rated voltage applied after 2 minutes 20°C.
See the Dimension & Permissible Ripple Current</td></tr>
<tr><td>Dissipation Factor
Tan δ at 120Hz, 20°C</td><td>See the Dimension & Permissible Ripple Current</td></tr>
<tr><td>ESR (at 100K ~ 300K Hz, 20°C)</td><td>See the Dimension & Permissible Ripple Current</td></tr>
<tr><td>Load Life Test</td><td>
<table>
<tr><td>TEST TIME</td><td>2,000 Hrs</td></tr>
<tr><td>CAPACITANCE CHANGE</td><td>Within ±20% of initial value</td></tr>
<tr><td>DISSIPATION FACTOR</td><td>Less than 150% of specified value</td></tr>
<tr><td>ESR</td><td>Less than 150% of specified value</td></tr>
<tr><td>LEAKAGE CURRENT</td><td>Within specified value</td></tr>
</table>
*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.
</td></tr>
<tr><td>Moisture Resistance</td><td>
<table>
<tr><td>TEST TIME</td><td>1,000 Hrs</td></tr>
<tr><td>CAPACITANCE CHANGE</td><td>Within ±20% of initial value</td></tr>
<tr><td>DISSIPATION FACTOR</td><td>Less than 150% of specified value</td></tr>
<tr><td>ESR</td><td>Less than 150% of specified value</td></tr>
<tr><td>LEAKAGE CURRENT</td><td>Within specified value</td></tr>
</table>
*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 hrs. Leakage current should be tested after voltage treatment.
</td></tr>
<tr><td>Ripple Current &
Frequency Multipliers</td><td>
<table>
<tr><td>FREQUENCY (Hz)</td><td>120≤ f <1k</td><td>1k ≤ f < 10k</td><td>10k ≤ f,<100k</td><td>100k ≤ f <500k</td></tr>
<tr><td>MULTIPLIER</td><td>0.05</td><td>0.3</td><td>0.7</td><td>1.0</td></tr>
</table>
</td></tr>
</table>

STANDARD RATINGS

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

W. V. (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)	390	6.3 x 5.9	0.12	300	14	3,160
	680	8 x 7	0.12	500	20	3,370
	820	8 x 12	0.15	500	9	5,380
	1,200	10 x 8	0.12	600	13	4,450
	1,500	8 x 12	0.15	750	12	5,150
	1,500	10 x 12.7	0.15	750	7	7,200
	2,700	10 x 12.7	0.15	1,350	11	5,600
4V (0G)	270	6.3 x 5.9	0.12	300	15	3,160
	330	6.3 x 5.9	0.12	300	15	3,160
	560	8 x 7	0.12	500	22	3,220
	560	8 x 12	0.15	500	9	5,380
	1,200	8 x 12	0.15	960	12	4,700
	1,500	8 x 12	0.15	1,200	12	4,700
	1,000	10 x 8	0.12	800	14	4,300
	1,200	10 x 12.7	0.15	960	7	7,200
	2,200	10 x 12.7	0.15	1,760	11	7,200
6.3V (0J)	220	6.3 x 5.9	0.12	300	15	3,160
	390	8 x 7	0.12	491	22	3,220
	820	8 x 12	0.15	1,033	13	4,700
	820	10 x 8	0.12	1,033	14	4,300
	820	10 x 12.7	0.15	1,033	7	5,600
	1,500	10 x 12.7	0.15	1,890	12	5,560
10V (1A)	120	6.3 x 5.9	0.12	300	22	2,600
	270	8 x 7	0.12	500	22	3,220
	470	10 x 8	0.12	940	19	3,800
16V (1C)	39	6.3 x 5.9	0.12	300	24	2,460
	68	6.3 x 5.9	0.12	300	25	2,440
	150	8 x 7	0.12	500	22	3,220
	180	8 x 12	0.15	864	16	4,070
	220	10 x 8	0.12	704	22	3,450
	330	10 x 12.7	0.15	1,056	12	5,300