

# PC29 - Surface Mount Aluminum Electrolytic Capacitor

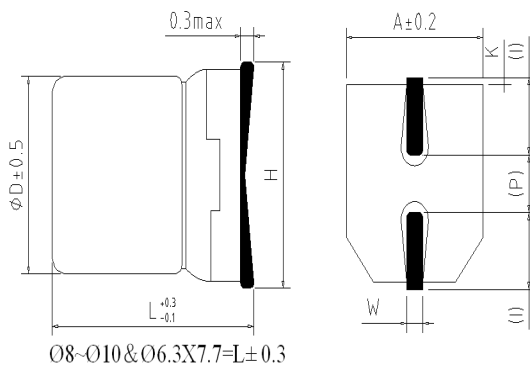
- \* Features: 105°C 1000 hours, Higher temperature range Than GV, Low profile vertical chip
- \* Recommended Application: Suitable for AV(TV, Video, Audio), Monitor/Computer, OA/HA/Communication
- \* Corresponding product to RoHS



## Specifications

Item	Characteristics																																								
Operating Temperature Range	-40 ~ +105°C																																								
Rated Voltage Range (WV)	4 ~ 100VDC																																								
Capacitance Range	0.1 ~ 1000μF																																								
Capacitance Tolerance	± 20% at 120Hz, 20°C																																								
Leakage Current (MAX) (20°C)	$I \leq 0.01CV$ or $3(\mu A)$ , whichever is greater. (After rated voltage applied for 2 minutes) $I$ = Leakage Current ( $\mu A$ ) $C$ = Nominal Capacitance ( $\mu F$ ) $V$ = Rated Voltage (V)																																								
Dissipation Factor (MAX) (tan $\delta$ ) (120Hz, 20°C)	Shown in the table of standard rating																																								
Low Temperature Stability Impedance Ratio (MAX)	<table border="1"> <thead> <tr> <th>WV</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Z(120HZ)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Z(-25°C) / Z(20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>15</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	WV	4	6.3	10	16	25	35	50	63	100	Z(120HZ)										Z(-25°C) / Z(20°C)	7	4	3	2	2	2	2	2	2	Z(-40°C) / Z(20°C)	15	8	6	4	4	3	3	3	3
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Endurance	<p>After applying rated voltage for 1000hrs at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ± 20% of the initial value</td> </tr> <tr> <td>Dissipation Facot</td> <td>Not more than 200% of the specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value</td> </tr> </tbody> </table>	Capacitance Change	Within ± 20% of the initial value	Dissipation Facot	Not more than 200% of the specified value	Leakage Current	Not more than the specified value																																		
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Shelf Life	After placed at 105°C without voltage applied for 1000 hours, the capacitor shall meet the same requirement as Endurance.																																								

## Diagram of Dimensions (mm)



ΦD	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5 Max	1.8	0.65±0.1	1.0±0.2	0.35 +0.15 -0.20
5.0	5.4	5.3	6.5 Max	2.2	0.65±0.1	1.5±0.2	0.35 +0.15 -0.20
6.3	5.4	6.6	7.8 Max	2.6	0.65±0.1	1.8±0.2	0.35 +0.15 -0.20
6.3	7.7	6.6	7.8 Max	2.6	0.65±0.1	1.8±0.2	0.35 +0.15 -0.20
8.0	6.2	8.3	9.5 Max	3.4	0.65±0.1	2.2±0.2	0.35 +0.15 -0.20
8.0	10.2	8.3	10.0 Max	3.4	0.90±0.2	3.1±0.2	0.70±0.2
10.0	10.2	10.3	12.0 Max	3.5	0.90±0.2	4.6±0.2	0.70±0.2

## Multiplier for Ripple Current

Frequency coefficient				
Frequency (Hz)	60	120	1K	10K
Coefficient	0.80	1.00	1.15	1.25
Temperature coefficient				
Ambient Temperature (°C)	≤50	70	85	105
Coefficient	1.90	1.75	1.40	1.00

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Dimensions, Max Dissipation Factor, Max Permissible Ripple Current, Max Equivalent Series Resistance

Capacitance ( $\mu\text{F}$ )	Rated (Surge) Voltage															
	4(5)				6.3(8)				10(13)				16(20)			
	Size	$\tan\delta$	Ripple	ESR	Size	$\tan\delta$	Ripple	ESR	Size	$\tan\delta$	Ripple	ESR	Size	$\tan\delta$	Ripple	ESR
4.7													4x5.4	0.16	20	45.1
10								4x5.4	0.30	24	39.7	4x5.4	0.16	28	21.2	
22	4x5.4	0.35	20	21.1	4x5.4	0.30	29	18.0	4x5.4	0.30	36	18.0	5x5.4	0.16	39	9.64
33	4x5.4	0.35	26	14.0	4x5.4	0.30	43	12.0	4x5.4	0.30	45	12.0	6.3x5.4	0.20	65	8.03
47	4x5.4	0.35	34	9.87	5x5.4	0.30	46	8.46	6.3x5.4	0.30	70	8.46	6.3x5.4	0.20	70	5.64
													6.3x7.7	0.20	125	2.39
100	5x5.4	0.35	61	4.64	6.3x5.4	0.35	71	4.64	8x6.2	0.30	110	3.97	8x6.2	0.20	130	2.65
220	6.3x5.4	0.35	82	2.11	6.3x7.7	0.35	120	2.11	6.3x7.7	0.30	115	1.80	6.3x7.7	0.20	100	1.08
					8x6.2	0.35	130	2.11	8x10.2	0.26	160	1.80	10x10.2	0.20	210	1.20
330					6.3x7.7	0.35	175	1.40	10x10.2	0.26	230	1.04	10x10.2	0.20	230	0.80
					8x10.2	0.35	230	1.40								
470					10x10.2	0.35	260	0.99	10x10.2	0.26	270	0.73	10x10.2	0.20	275	0.56
1000					10x10.2	0.35	380	0.46	10x10.2	0.26	390	0.34				

Capacitance ( $\mu\text{F}$ )	Rated (Surge) Voltage											
	25(32)				35(44)				50(63)			
	Size	$\tan\delta$	Ripple	ESR	Size	$\tan\delta$	Ripple	ESR	Size	$\tan\delta$	Ripple	ESR
0.1									4x5.4	0.12	1	1593
0.22									4x5.4	0.12	2	723
0.33									4x5.4	0.12	3	482
0.47									4x5.4	0.12	5	338
1									4x5.4	0.12	10	159
2.2					4x5.4	0.12	15	72.3	4x5.4	0.12	16	72.3
3.3					4x5.4	0.12	18	48.2	4x5.4	0.12	16	48.2
4.7	4x5.4	0.14	22	39.5	4x5.4	0.12	22	33.8	5x5.4	0.12	23	33.8
10	5x5.4	0.14	28	18.5	5x5.4	0.12	30	15.9	6.3x5.4	0.12	35	15.9
22	6.3x5.4	0.14	55	8.44	6.3x5.4	0.14	60	8.44	6.3x7.7	0.12	65	7.23
									8x6.2	0.12	70	7.23
33	6.3x5.4	0.16	65	6.43	8x6.2	0.14	84	5.62	6.3x7.7	0.12	70	4.82
									8x10.2	0.12	91	4.82
47	8x6.2	0.16	91	4.51	8x10.2	0.14	98	3.95	6.3x7.7	0.12	65	3.38
									10x10.2	0.12	100	3.38
100	6.3x7.7	0.16	95	2.12	6.3x7.7	0.14	105	1.85	10x10.2	0.12	145	1.59
	8x10.2	0.16	130	2.12	10x10.2	0.14	160	1.85				
220	10x10.2	0.16	273	0.96	10x10.2	0.14	240	0.84				

Capacitance ( $\mu\text{F}$ )	Rated (Surge) Voltage							
	63(79)				100(125)			
	Size	$\tan\delta$	Ripple	ESR	Size	$\tan\delta$	Ripple	ESR
3.3					8x10.2	0.18	30	72.3
4.7	6.3x5.4	0.18	20	50.8	8x10.2	0.18	50	50.8
10	6.3x5.4	0.18	20	23.8	8x10.2	0.18	55	23.8
22	8x10.2	0.18	30	10.8	10x10.2	0.18	60	10.8
33	8x10.2	0.18	30	7.23	10x10.2	0.18	65	7.23
47	8x10.2	0.18	30	5.08				
100	10x10.2	0.18	60	2.38				

☆Size:D $\Phi$  x L(mm). ☆ $\tan\delta$  : 20°C , 120Hz. ☆Ripple Current: 105°C , 120Hz,(mA/rms) ☆ESR:20°C , 120Hz,( $\Omega$ ).