

CapXon GL Series

GL Series Low Impedance, Long Life

Features

- ◆ Low impedance for high frequency, Anti-Solvent Design.
- ◆ Long Life 2000 ~ 5000 Hrs at 105°C depending on case size.
- ◆ Radial type for switching power supplies.
- ◆ For detail specifications, please refer to Engineering Bulletin No. E103



Specifications

Item	Performance Characteristics																																
Operating Temperature Range	-55 to +105°C																																
Rated Voltage Range	6.3 to 63 VDC																																
Capacitance Range	0.47 to 4700 μ F																																
Capacitance Tolerance	±20% (120Hz, +20°C)																																
Leakage Current(+20°C, max)	I ≤ 0.01 CV or 2 (μ A) After 2 minutes whichever is greater measured with rateworking voltage applied.																																
Dissipation Factor(tanδ)	<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>D.F.(%) Max.</td> <td>22</td> <td>19</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>9</td> </tr> </table> <p>For Capacitance > 1000 μ F, Add 2% per another 1000μ F. (+20°C at 120Hz)</p>	Working Voltage(VDC)	6.3	10	16	25	35	50	63	D.F.(%) Max.	22	19	16	14	12	10	9																
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Low Temperature Characteristics (120Hz)	<p>Impedance ratio (max)</p> <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>1.5</td> <td>1.5</td> <td>1.5</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-55°C/Z+20°C</td> <td>8</td> <td>6</td> <td>5</td> <td>5</td> <td>4</td> <td>4</td> <td>4</td> </tr> </table> <p>For Capacitance Value > 1000 μ F, Add 0.5 per another 1000 μ F for -25°C/+20°C Add 1 per another 1000 μ F for -40°C/+20°C</p>	Working Voltage(VDC)	6.3	10	16	25	35	50	63	Z-25°C/Z+20°C	4	3	2	2	1.5	1.5	1.5	Z-40°C/Z+20°C	6	4	3	3	2	2	2	Z-55°C/Z+20°C	8	6	5	5	4	4	4
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Load Life	<p>Test conditions</p> <p>Duration time :as right</p> <p>Ambient temperature :+105°C</p> <p>Applied voltage :Rated DC working voltage</p> <p>After test requirements at +20°C</p> <p>Capacitance change :≦ ± 20% of the initial measured value</p> <p>Dissipation factor :≦ 200% of the initial specified value</p> <p>Leakage current :≦ The initial specified value</p> <table border="1"> <tr> <td>D φ</td> <td>Life hours</td> </tr> <tr> <td>5 - 6.3 φ</td> <td>2000</td> </tr> <tr> <td>8 φ</td> <td>3000</td> </tr> <tr> <td>10 φ ≧</td> <td>5000</td> </tr> </table>	D φ	Life hours	5 - 6.3 φ	2000	8 φ	3000	10 φ ≧	5000																								
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Shelf Life	<p>Test conditions</p> <p>Duration time :1000Hrs</p> <p>Ambient temperature :+105°C</p> <p>Applied voltage :None</p> <p>After test requirements at +20°C:Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.</p>																																

Multiplier for Ripple Current vs. Frequency

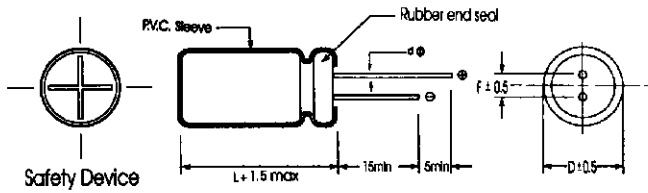
CAP(μ F) \ Hz		50(60)	120	400	1K	10K	50K-100K
Multiplier	CAP ≤ 10	0.47	0.59	0.76	0.85	0.97	1
	10 < CAP ≤ 100	0.52	0.65	0.80	0.89	0.97	1
	100 < CAP ≤ 1000	0.58	0.72	0.84	0.90	0.98	1
	1000 < CAP	0.63	0.78	0.87	0.91	0.98	1

Multiplier for Ripple Current vs. Temperature

Temperature°C	45	60	70	85	95	105
Multiplier	2.10	1.90	1.65	1.40	1.25	1.00

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Diagram of Dimensions: (Unit:mm)



Dφ	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
dφ	0.5		0.6		0.8		

Case Size

WV(SV) μ F	φ DxL(mm)						
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)
0.47	→					5x11	5x11
1	→					5x11	5x11
2.2	→					5x11	5x11
3.3	→					5x11	5x11
4.7	→					5x11	5x11
10	→		5x11	5x11	5x11	5x11	5x11
22	→	5x11	5x11	5x11	5x11	6.3x11	6.3x11
33	→	5x11	5x11	5x11	5x11	6.3x11	8x11.5
47	→	5x11	5x11	5x11	6.3x11	8x11.5	8x11.5
100	5x11	5x11	6.3x11	6.3x11	6.3x15 8x11.5	8x16	10x16
220	6.3x11	6.3x11	6.3x15 8x11.5	8x11.5	8x15 10x12.5	10x20	10x25 13x20
330	6.3x15 8x11.5	6.3x15 8x11.5	8x11.5	8x15 10x12.5	10x16	10x25	10x30 13x25
470	6.3x15 8x11.5	8x11.5	8x15 10x12.5	10x16	10x20	13x20	16x25.5
1000	8x15 10x12.5	8x20 10x16	10x25	10x25 13x25	13x30	13x40 16x31.5	16x35.5
2200	10x25 13x20	13x25	13x25	13x30 16x25	16x31.5 18x25	18x35.5	—
3300	13x25	13x30	13x35 16x25	16x30 18x25	—	—	—
4700	13x30 16x25	13x35 16x31.5	16x31.5 18x25	16x40 18x35.5	—	—	—

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Maximum Ripple Current

(mA, rms, 100KHz at 105°C)

WV(SV) μ F	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)
0.47	→					15	16
1	→					25	27
2.2	→					33	38
3.3	→					45	48
4.7	→					58	62
10	→		37	56	70	100	105
22	→	56	70	120	130	135	245
33	→	58	130	150	175	230	265
47	→	120	190	220	250	285	351
100	185	205	260	300	390 380	475	610 590
220	300	330	470 455	550	740 720	900	1020
330	320 390	445 430	550	740 720	995	1050	1200 1160
470	435 415	555	745 722	1040	1150	1490	2000
1000	710 625	1040 1010	1180	1580 1530	1950	2200 2130	2450
2200	1400 1300	1690	1950	2480 2405	2650 2570	2900	—
3300	1425	1980	2410 2340	3050 2960	—	—	—
4700	1950 1800	2300 2100	2650 2570	3600 3490	—	—	—

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Maximum Impedance

(Ω , 100KHz at +20°C)

WV(SV) μ F	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)
0.47	→					6.30	6.30
1	→					4.00	4.00
2.2	→					2.80	2.80
3.3	→					2.40	2.40
4.7	→					2.40	2.40
10	→		4.00	2.10	2.80	1.80	1.90
22	→	2.70	2.00	1.80	1.50	1.00	0.85
33	→	2.20	1.26	1.20	1.30	0.80	0.61
47	→	1.20	0.52	0.50	0.80	0.50	0.56
100	1.10	0.48	0.31	0.28	0.18 0.19	0.18	0.24 0.25
220	0.70	0.28	0.20 0.21	0.125	0.095 0.098	0.080	0.110
330	0.38 0.35	0.15 0.16	0.12	0.085 0.082	0.065	0.068	0.065 0.070
470	0.25 0.30	0.115	0.092 0.095	0.065	0.050	0.055	0.050
1000	0.12 0.20	0.070 0.072	0.050	0.038 0.039	0.031	0.033 0.036	0.032
2200	0.06 0.10	0.041	0.035	0.025 0.028	0.025 0.030	0.025	—
3300	0.05	0.029	0.025 0.028	0.020 0.024	—	—	—
4700	0.025 0.036	0.025 0.031	0.024 0.028	0.016 0.017	—	—	—