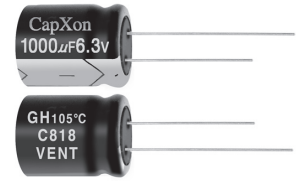


CapXon GH Series

GH Series

Features

- ◆ Low impedance
- ◆ High temperature, Long life 3,000 to 10,000 hours at 105°C
- ◆ For detail specifications, please refer to Engineering Bulletin NO. 170.



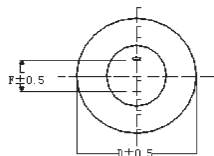
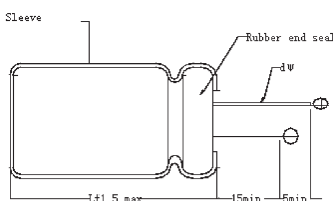
Specifications

Item	Performance Characteristics																												
Operating Temperature Range	-55 to +105°C																												
Rated Voltage Range	6.3 to 50 VDC																												
Capacitance Range	0.47 to 6800 µF																												
Capacitance Tolerance	±20%(120Hz, +20°C)																												
Leakage Current (+20°C, max.)	$I \leq 0.01 CV$ or $3 (\mu A)$ (After 2 minute with rated working voltage applied.)																												
Dissipation Factor ($\tan \delta$, at 20°C, 120Hz)	<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> </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> </tr> </table>	Working Voltage(VDC)	6.3	10	16	25	35	50	D.F.(%)max.	22	19	16	14	12	10														
	Working Voltage(VDC)	6.3	10	16	25	35	50																						
D.F.(%)max.	22	19	16	14	12	10																							
For capacitance > 1000 µF, add 2% per another 1000 µF.																													
Low Temperature Characteristics (at 120Hz)	Impedance ratio max																												
	<table border="1"> <tr> <td>Rated voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</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> </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> </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> </tr> </table>	Rated voltage(VDC)	6.3	10	16	25	35	50	Z-25°C / Z+20°C	4	3	2	2	1.5	1.5	Z-40°C / Z+20°C	6	4	3	3	2	2	Z-55°C / Z+20°C	8	6	5	5	4	4
	Rated voltage(VDC)	6.3	10	16	25	35	50																						
	Z-25°C / Z+20°C	4	3	2	2	1.5	1.5																						
Z-40°C / Z+20°C	6	4	3	3	2	2																							
Z-55°C / Z+20°C	8	6	5	5	4	4																							
For Capacitance > 1000 µF, add 0.5 per another 1000 µF for -25°C / +20°C add 1 per another 1000 µF for -40°C / +20°C add 1.5 per another 1000 µF for -55°C / +20°C																													
Load Life	Test condition Duration time:																												
	<table border="1"> <tr> <td>D φ</td> <td>5-6.3 φ</td> <td>8-12 φ</td> <td>≥ 13 φ</td> </tr> <tr> <td>+105°C life hours</td> <td>4000 hours</td> <td>7000 hours</td> <td>10000 hours</td> </tr> </table>	D φ	5-6.3 φ	8-12 φ	≥ 13 φ	+105°C life hours	4000 hours	7000 hours	10000 hours																				
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* down size load life																													
<table border="1"> <tr> <td>D φ</td> <td>5-6.3 φ</td> <td>8 φ</td> <td>10~12.5 φ</td> <td>≥ 13 φ</td> </tr> <tr> <td>+105°C</td> <td>3000 hours</td> <td>4000 hours</td> <td>6000hrs</td> <td>7000hours</td> </tr> </table>	D φ	5-6.3 φ	8 φ	10~12.5 φ	≥ 13 φ	+105°C	3000 hours	4000 hours	6000hrs	7000hours																			
D φ	5-6.3 φ	8 φ	10~12.5 φ	≥ 13 φ																									
+105°C	3000 hours	4000 hours	6000hrs	7000hours																									
Ambient temperature : +105°C Applied voltage : Rated DC working voltage After test requirement at +20°C Capacitance change : ≤ ±25% of the initial measured value Dissipation factor : ≤ 200% of the initial specified value Leakage current : ≤ The initial specified value																													
Shelf Life	Test condition Duration time : 1000 Hrs Ambient temperature : +105°C Applied voltage : None After test requirement at +20°C: Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																												

Multiplier for Ripple Current vs. Frequency

CAP(µF) \ Frequency(Hz)	120	400	1K	10K	100K
CAP ≤ 10	0.40	0.52	0.60	0.92	1
10 < CAP ≤ 100	0.67	0.80	0.83	0.94	1
100 < CAP ≤ 1000	0.75	0.84	0.88	0.95	1
1000 < CAP	0.82	0.87	0.92	0.95	1

Diagram of Dimensions:(unit:mm)



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

CapXon GH Series

Case Size

φ DxL(mm)

WV(SV) Cap(μF)	6.3(8)			10(13)			16(20)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
10							5X11	30	3.9
15							5X11	60	3.32
22				5X11	55	3.08	5X11	60	2.64
27				5X11	60	2.67	5X11	110	2.37
33				5X11	60	2.33	5X11	120	2
39				5X11	100	2.02	5X11	140	1.61
47				5X11	110	1.71	5X11	155	1.35
56				5X11	120	1.47	5X11	175	1.24
68				5X11	135	1.3	5X11	190	1.18
82	5X11	165	1.63	5X11	160	1.15	6.3X11	220	1.03
100	5X11	175	1.45	5X11	185	1.02	6.3X11	220	0.86
				6.3X11	200	1.02			
120	5X11	185	1.28	5X11*	205	1.02	6.3X11	260	0.66
				6.3X11	215	1.02			
150	6.3X11	200	1.16	6.3X11	235	0.95	6.3X11*	280	0.58
							6.3X15	330	0.58
180	6.3X11	235	1.04	6.3X11	265	0.68	6.3X15	350	0.56
							8X11.5	355	0.54
220	6.3X11	315	0.89	6.3X11*	305	0.60	6.3X15	420	0.52
				6.3X15	325	0.58	8X11.5	450	0.46
270	6.3X11	330	0.77	6.3X15	345	0.56	6.3X15*	450	0.42
				8X11.5	350	0.53	8X11.5	485	0.38
330	6.3X11*	315	0.77	6.3X15	385	0.47	8X11.5*	490	0.37
	6.3X15	355	0.68	8X11.5	410	0.45	8X16	515	0.35
	8X11.5	370	0.68						
390	6.3X15*	385	0.58	6.3X15*	380	0.42	8X11.5*	510	0.33
	8X11.5	400	0.52	8X11.5	430	0.42	8X16	545	0.33
							10X12.5	540	0.33
470	6.3X15	420	0.41	6.3X15*	400	0.37	8X16*	705	0.29
	8X11.5	445	0.38	8X11.5	460	0.30	8X20	750	0.28
	10X12.5	470	0.38				10X12.5	735	0.28
560	8X11.5*	475	0.36	8X11.5*	490	0.28	8X16*	720	0.26
	8X16	500	0.36	8X16	530	0.25	8X20	780	0.24
	10X12.5	510	0.36	10X12.5	530	0.25	10X12.5*	735	0.24
							10X16	800	0.20
680	8X11.5*	485	0.33	8X16	550	0.21	8X20*	800	0.20
	8X16	515	0.33	8X20	570	0.20	10X16	870	0.18
	10X12.5	535	0.33	10X12.5	570	0.20			
820	8X11.5*	555	0.25	8X16*	610	0.20	8X20*	920	0.17
	10X12.5	600	0.25	8X20	690	0.18	10X16*	1045	0.15
				10X12.5*	730	0.16	10X20	1100	0.15
				10X16	780	0.16			
1000	8X16	575	0.22	8X16*	850	0.16	10X16*	1170	0.14
	8X20	630	0.22	8X20	935	0.14	10X20	1230	0.12
	10X12.5	590	0.22	10X12.5*	860	0.14			
				10X16	950	0.13			
1200	8X20	700	0.18	8X20*	1040	0.13	10X20*	1250	0.13
	10X16	740	0.18	10X16*	1060	0.13	10X25	1315	0.11
				10X20	1140	0.12			
1500	8X20	880	0.15	10X20	1280	0.106	10X25*	1350	0.096
	10X16	940	0.12				13X20	1440	0.095
	10X20	980	0.12						
1800	8X25*	1025	0.11	10X25	1375	0.102	10X30*	1480	0.097
	10X20	1090	0.11	13X20	1420	0.098	13X20*	1545	0.094
							13X25	1630	0.090
2200	10X20	1125	0.1	10X25*	1480	0.095	13X20*	1735	0.09
	10X25	1135	0.1	10X30	1550	0.093	13X25	1950	0.085
				13X20	1560	0.093			
2700	10X25	1240	0.09	10X30	1730	0.084	13X25*	2030	0.076
	10X30	1300	0.09	13X20*	1690	0.084	13X30	2080	0.072
	13X20	1260	0.09	13X25	1770	0.084	16X25	2120	0.072
3300	10X30	1350	0.085	10X30*	1860	0.070	13X30*	2135	0.068
	13X20	1320	0.085	13X25*	1890	0.070	13X35	2190	0.066
				16X25	1930	0.070	16X25*	2250	0.064
3900	13X25	1550	0.08	13X25*	1920	0.065	13X35*	2220	0.05
				13X30	1980	0.065	16X25*	2280	0.06
				16X25	2120	0.065	16X31.5	2380	0.058
4700	13X25	1615	0.075	13X30*	2070	0.065	16X31.5	2405	0.05
	13X30	1660	0.07	13X35	2140	0.060	18X25*	2370	0.055
				16X25*	2195	0.057			
5600	13X30	1650	0.068	13X35*	2200	0.054	18X31.5*	2570	0.048
	16X25	1830	0.068	16X31.5	2280	0.050	18X35.5	2640	0.045
6800	13X30*	2100	0.063	16X31.5	2470	0.046	18X35.5*	2710	0.040
	16X25	2265	0.063						

"*" is down size

Ripple Current (mA, rms) at 105°C 100KHz

Max Impedance(Ω)at 20°C 100KHz

CapXon GH Series

φ DxL(mm)

WV(SV) Cap(μF)	25(32)			35(44)			50(63)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
0.47							5X11	10	7.23
1							5X11	20	4.31
2.2							5X11	30	2.75
3.3							5X11	40	2.62
4.7							5X11	55	2.52
5.6							5X11	80	2.34
6.8							5X11	80	2.28
8.2							5X11	90	2.17
10	5X11	55	3.01	5X11	70	2.65	5X11	100	2.05
15	5X11	100	2.64	5X11	120	2.29	5X11	125	1.87
22	5X11	120	2.3	5X11	135	1.83	5X11*	135	1.6
							6.3X11	140	1.27
27	5X11	130	2.03	5X11*	145	1.58	6.3X11	160	1.02
				6.3X11	165	1.42			
33	5X11	145	1.72	5X11*	185	1.25	6.3X11*	235	0.87
				6.3X11	200	1.25	6.3X15	247	0.85
39	5X11	145	1.5	6.3X11	210	1.1	6.3X11*	255	0.72
							6.3X15	275	0.7
47	5X11	185	1.37	6.3X11	220	0.92	6.3X15	290	0.55
							8X11.5	305	0.55
56	5X11	220	1.25	6.3X11*	235	0.75	8X11.5	315	0.47
				6.3X15	255	0.68			
68	6.3X11	250	0.97	6.3X11*	260	0.62	8X11.5	350	0.36
				6.3X15	290	0.55			
82	6.3X11	260	0.79	6.3X15	295	0.51	6.3X15*	385	0.35
				8X11.5	320	0.47	8X11.5*	410	0.3
100	6.3X11	300	0.68	6.3X15*	315	0.47	8X16	440	0.28
				8X11.5	345	0.45	8X11.5*	450	0.28
120	6.3X11	335	0.58	8X11.5*	455	0.42	8X16	480	0.25
	6.3X15	385	0.56	8X16	510	0.38	8X16	525	0.21
150	6.3X15	425	0.54	8X16	595	0.35	8X16*	580	0.21
	8X11.5	440	0.52	10X12.5	600	0.35	8X20	630	0.18
180	6.3X15	455	0.51	8X16	660	0.32	10X16	650	0.18
	8X11.5	460	0.46	10X12.5	670	0.32	8X20*	720	0.18
220	8X11.5	515	0.42	8X16*	720	0.26	10X16	760	0.16
	8X16	535	0.4	8X20	780	0.24	10X16*	880	0.15
270				10X12.5*	740	0.24	10X20	935	0.15
	8X11.5*	625	0.34	8X20*	880	0.2	10X20*	1010	0.1
330	8X16	630	0.32	10X12.5*	820	0.24	10X25	1070	0.1
	10X12.5	680	0.32	10X16	890	0.18			
470	8X16	800	0.25	8X20*	950	0.16	10X25*	1170	0.084
	10X12.5	770	0.24	10X16*	980	0.15	13X20	1250	0.082
560	8X20	880	0.23	10X20*	1085	0.11	13X20*	1480	0.078
	10X12.5*	850	0.21	10X25	1165	0.10	13X25	1550	0.078
680	10X16	900	0.21	13X20	1165	0.10			
	8X20*	1020	0.17	10X25*	1310	0.096	13X20*	1745	0.075
820	10X16	1050	0.15	13X20	1320	0.096	13X25	1810	0.070
	10X20	1225	0.11	10X25*	1400	0.084	13X25*	1920	0.057
1000				13X20	1410	0.082	16X25	1980	0.057
	10X20*	1390	0.11	13X20*	1515	0.068	13X30*	2010	0.052
1200	10X25	1420	0.1	13X25	1620	0.062	16X31.5	2070	0.052
	10X25*	1510	0.093	10X30*	1780	0.060	16X25*	2230	0.050
1500	13X20	1560	0.090	13X25*	1820	0.060	16X31.5	2280	0.048
				13X30	1900	0.058			
1800	13X20	1690	0.082	13X25*	1910	0.052	16X31.5*	2460	0.045
	13X20*	1770	0.067	16X25	2140	0.05	16X35.5	2540	0.042
2200	13X25	1825	0.065	13X35*	2350	0.048	16X35.5*	2680	0.038
	13X30	1925	0.058	16X31.5	2440	0.048			
2700	16X25	1950	0.058	13X35*	2480	0.045			
	13X30*	2160	0.052	16X31.5*	2690	0.036			
3300	16X25	2260	0.050	18X25*	2610	0.036			
	13X35	2375	0.050	18X31.5*	2780	0.032			
	16X31.5	2465	0.046						
	16X31.5*	2670	0.038						
	16X35.5	2740	0.036						
	18X25*	2630	0.041						

"*" is down size

Ripple Current (mA, rms) at 105°C 100KHz

Max Impedance(Ω)at 20°C 100KHz