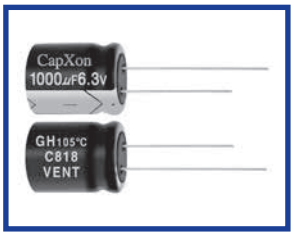
GH Series



Features

- ◆ Low impedance
- ◆ High temperature, Long life 5,000 to 10,000 hours at 105℃
- ◆ AEC-Q200 qualified

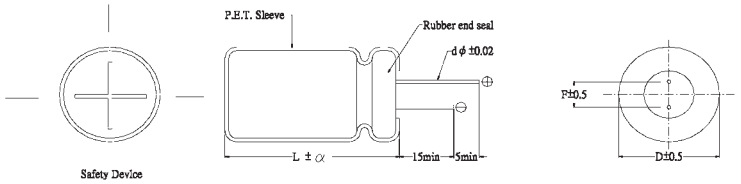
Specifications

Item	Performance Characteristics
Operating Temperature Range	-55 to +105℃
Rated Voltage Range	6.3 to 50 VDC
Capacitance Range	0.47 to 6800 μF
Capacitance Tolerance	±20%(120Hz,+20℃)
Leakage Current (+20℃,max.)	I≦0.01 CV or 3 (μA) (After 2 minute with rated working voltage applied.)
Dissipation Factor (tan δ ，at 20℃，120Hz)	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 Rated voltage(VDC): 6.3 / 10 / 16 / 25 / 35 / 50 Z-25℃ / Z+20℃: 4 / 3 / 2 / 2 / 1.5 / 1.5 Z-40℃ / Z+20℃: 6 / 4 / 3 / 3 / 2 / 2 Z-55℃ / Z+20℃: 8 / 6 / 5 / 5 / 4 / 4 For Capacitance ＞1000 μF, add 0.5 per another 1000 μF for -25℃／+20℃ add 1 per another 1000 μF for -40℃／+20℃ add 1.5 per another 1000 μF for -55℃／+20℃
Endurance	Test condition Duration time: Dφ: 5-6.3φ / 8-12φ / ≧13φ +105℃Life hours: 5000 hours / 7000 hours / 10000 hours Ambient temperature :+105℃ Applied voltage :Rated DC working voltage After test requirement at +20℃ 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℃ Applied voltage :None After test requirement at +20℃:Same limits as Endurance. 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)



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		L＜20	L≧20	0.6		0.8	
			0.5	0.6				

α	D＜18	D＝18		D＞18
		L＜35.5	L≧35.5	
	1.5	1.5	2.0	2.0

Radial

CapXon

GH Series

Case Size

ϕ DxL(mm)

WV / Cap(μ F)	6.3			10			16		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
10							5x11	36	3.9
15							5x11	72	3.32
22				5x11	66	3.08	5x11	72	2.64
27				5x11	72	2.67	5x11	132	2.37
33				5x11	72	2.33	5x11	144	2
39				5x11	120	2.02	5x11	168	1.61
47				5x11	132	1.71	5x11	186	1.35
56				5x11	144	1.47	5x11	210	1.24
68				5x11	162	1.3	5x11	228	1.18
82	5x11	198	1.63	5x11	192	1.15	6.3x11	264	1.03
100	5x11	210	1.45	5x11	222	1.02	6.3x11	264	0.86
				6.3x11	240	1.02	5x11	228	1.1
120	5x11	222	1.28	5x11	246	1.02	6.3x11	312	0.66
				6.3x11	258	1.02			
150	6.3x11	240	1.16	6.3x11	282	0.95	6.3x11	336	0.58
							6.3x15	396	0.58
180	6.3x11	282	1.04	6.3x11	318	0.68	6.3x15	420	0.56
							8x11.5	426	0.54
220	6.3x11	378	0.89	6.3x11	366	0.60	6.3x15	504	0.52
				6.3x15	390	0.58	8x11.5	540	0.46
270	6.3x11	396	0.77	6.3x15	414	0.56	6.3x15	540	0.42
				8x11.5	420	0.53	8x11.5	582	0.38
330	6.3x11	378	0.77	6.3x15	462	0.47	8x11.5	588	0.37
	6.3x15	426	0.68	8x11.5	492	0.45	8x16	618	0.35
	8x11.5	444	0.68				6.3x15	588	0.34
390	6.3x15	462	0.58	6.3x15	456	0.42	8x11.5	612	0.33
	8x11.5	480	0.52	8x11.5	516	0.42	8x16	654	0.33
							10x12.5	648	0.33
470	6.3x15	504	0.41	6.3x15	480	0.37	8x16	846	0.29
	8x11.5	534	0.38	8x11.5	552	0.30	8x20	900	0.28
	10x12.5	564	0.38				10x12.5	882	0.28
560	8x11.5	570	0.36	8x11.5	588	0.28	8x16	864	0.26
	8x16	600	0.36	8x16	636	0.25	8x20	936	0.24
	10x12.5	612	0.36	10x12.5	636	0.25	10x12.5	882	0.24
							10x16	960	0.20
680	8x11.5	582	0.33	8x16	660	0.21	8x20	960	0.20
	8x16	618	0.33	8x20	684	0.20	10x16	1044	0.18
	10x12.5	642	0.33	10x12.5	684	0.20			
820	8x11.5	666	0.25	8x16	732	0.20	8x20	1104	0.17
	10x12.5	720	0.25	8x20	828	0.18	10x16	1254	0.15
				10x12.5	876	0.16	10x20	1320	0.15
				10x16	936	0.16			
1000	8x16	690	0.22	8x16	1020	0.16	10x16	1404	0.14
	8x20	756	0.22	8x20	1122	0.14	10x20	1476	0.12
	10x12.5	708	0.22	10x12.5	1032	0.14			
				10x16	1140	0.13			
1200	8x20	840	0.18	8x20	1248	0.13	10x20	1500	0.13
	10x16	888	0.18	10x16	1272	0.13	10x25	1578	0.11
				10x20	1368	0.12			
1500	8x20	1056	0.15	10x20	1536	0.106	10x25	1620	0.096
	10x16	1128	0.12				13x20	1728	0.095
	10x20	1176	0.12						
1800	8x25	1230	0.11	10x25	1650	0.102	10x30	1776	0.097
	10x20	1308	0.11	13x20	1704	0.098	13x20	1854	0.094
							13x25	1956	0.090
2200	10x20	1350	0.1	10x25	1776	0.095	13x20	2082	0.09
	10x25	1362	0.1	10x30	1860	0.093	13x25	2340	0.085
				13x20	1872	0.093			
2700	10x25	1488	0.09	10x30	2076	0.084	13x25	2436	0.076
	10x30	1560	0.09	13x20	2028	0.084	13x30	2496	0.072
	13x20	1512	0.09	13x25	2124	0.084	16x25	2544	0.072
3300	10x30	1620	0.085	10x30	2232	0.070	13x30	2562	0.068
	13x20	1584	0.085	13x25	2268	0.070	13x35	2628	0.066
				16x25	2316	0.070	16x25	2700	0.064
3900	13x25	1860	0.08	13x25	2304	0.065	13x35	2664	0.05
				13x30	2376	0.065	16x25	2736	0.06
				16x25	2544	0.065	16x31.5	2856	0.058
4700	13x25	1938	0.075	13x30	2484	0.065	16x31.5	2886	0.05
	13x30	1992	0.07	13x35	2568	0.060	18x25	2844	0.055
				16x25	2634	0.057			
5600	13x30	1980	0.068	13x35	2640	0.054	18x31.5	3084	0.048
	16x25	2196	0.068	16x31.5	2736	0.050	18x35.5	3168	0.045
6800	13x30	2520	0.063	16x31.5	2964	0.046	18x35.5	3252	0.040
	16x25	2718	0.063						

Ripple Current (mA, rms) at 105℃ 100KHz

Max Impedance(Ω)at 20℃ 100KHz

CapXon

GH Series

ϕ DxL(mm)

WV / Cap(μF)	25			35			50		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
0.47							5x11	12	7.23
1							5x11	24	4.31
2.2							5x11	36	3.6
3.3							5x11	48	3.5
4.7							5x11	66	3.3
5.6							5x11	96	3.2
6.8							5x11	96	3.0
8.2							5x11	108	2.8
10	5x11	66	3.01	5x11	84	2.65	5x11	120	2.6
15	5x11	120	2.64	5x11	144	2.29	5x11	150	1.87
22	5x11	144	2.3	5x11	162	1.9	5x11	162	1.6
							6.3x11	168	1.27
27	5x11	156	2.03	5x11	174	1.58	6.3x11	192	1.02
				6.3x11	198	1.42			
33	5x11	174	1.72	5x11	222	1.25	6.3x11	282	0.87
				6.3x11	240	1.25	6.3x15	296.4	0.85
39	5x11	174	1.5	6.3x11	252	1.1	6.3x11	306	0.72
							6.3x15	330	0.7
47	5x11	222	1.37	6.3x11	264	0.92	6.3x15	348	0.55
	6.3x11	240	1.28				8x11.5	366	0.55
56	5x11	264	1.25	6.3x11	282	0.75	8x11.5	378	0.47
				6.3x15	306	0.68			
68	6.3x11	300	0.97	6.3x11	312	0.62	8x11.5	420	0.36
				6.3x15	348	0.55			
82	6.3x11	312	0.79	6.3x15	354	0.51	6.3x15	462	0.35
				8x11.5	384	0.47	8x11.5	492	0.32
							8x16	528	0.28
100	6.3x11	360	0.68	6.3x15	378	0.47	8x11.5	540	0.28
	8x11.5	516	0.54	8x11.5	414	0.45	8x16	576	0.25
120	6.3x11	402	0.58	8x11.5	546	0.42	8x16	630	0.25
	6.3x15	462	0.56	8x16	612	0.38			
150	6.3x15	510	0.54	8x16	714	0.35	8x16	696	0.24
	8x11.5	528	0.52	10x12.5	720	0.35	8x20	756	0.24
							10x16	780	0.24
180	6.3x15	546	0.51	8x16	792	0.32	8x20	864	0.24
	8x11.5	552	0.46	10x12.5	804	0.32	10x16	912	0.24
220	8x11.5	618	0.42	8x16	864	0.26	10x16	1056	0.24
	8x16	642	0.4	8x20	936	0.24	10x20	1122	0.2
				10x12.5	888	0.24			
270	8x11.5	750	0.34	8x20	1056	0.22	10x20	1212	0.1
	8x16	756	0.32	10x12.5	984	0.24	10x25	1284	0.1
	10x12.5	816	0.32	10x16	1068	0.21			
330	8x16	960	0.25	8x20	1140	0.16	10x25	1404	0.095
	10x12.5	924	0.24	10x16	1176	0.15	13x20	1500	0.082
470	8x20	1056	0.23	10x20	1302	0.11	13x20	1776	0.078
	10x12.5	1020	0.21	10x25	1398	0.10	13x25	1860	0.078
	10x16	1080	0.21	13x20	1398	0.10			
560	8x20	1224	0.17	10x25	1572	0.096	13x20	2094	0.075
	10x16	1260	0.15	13x20	1584	0.096	13x25	2172	0.070
680	10x20	1470	0.11	10x25	1680	0.084	13x25	2304	0.057
				13x20	1692	0.082	16x25	2376	0.057
820	10x20	1668	0.11	13x20	1818	0.068	13x30	2412	0.052
	10x25	1704	0.1	13x25	1944	0.062	16x31.5	2484	0.052
1000	10x25	1812	0.093	10x30	2136	0.060	16x25	2676	0.050
	13x20	1872	0.090	13x25	2184	0.060	16x31.5	2736	0.048
				13x30	2280	0.058			
1200	13x20	2028	0.082	13x25	2292	0.052	16x31.5	2952	0.045
				16x25	2568	0.05	16x35.5	3048	0.042
1500	13x20	2124	0.067	13x35	2820	0.048	16x35.5	3216	0.038
	13x25	2190	0.065	16x31.5	2928	0.048			
1800	13x30	2310	0.058	13x35	2976	0.045			
	16x25	2340	0.058	16x31.5	3012	0.045			
2200	13x30	2592	0.052	16x31.5	3228	0.036			
	16x25	2712	0.050	18x25	3132	0.036			
2700	13x35	2850	0.050	18x31.5	3336	0.032			
	16x31.5	2958	0.046						
3300	16x31.5	3204	0.038						
	16x35.5	3288	0.036						
	18x25	3156	0.041						

Ripple Current (mA, rms) at 105℃ 100KHz

Max Impedance(Ω)at 20℃ 100KHz