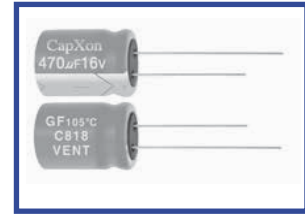


GF series Low Impedance

Features

- ◆ Used in mother board, computer peripheral, etc.
- ◆ Endurance 2000~5000 Hrs at 105°C
- ◆ Safety vent construction design.
- ◆ RoHS Compliant



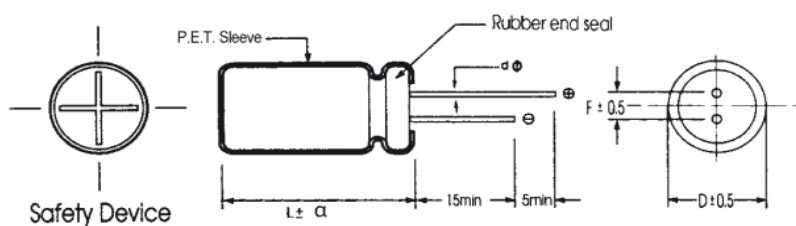
Specifications

Item	Performance Characteristics									
Operating Temperature Range	-55to +105°C									
Rated Voltage Range	6.3 to 100 VDC									
Capacitance Range	4.7 to 6800 µF									
Capacitance Tolerance	±20% (120Hz, +20°C)									
Leakage Current (+20°C, max.)	I ≅ 0.01CV or 3(µA) After 2 minutes whichever is greater measured with rated working voltage applied.									
Dissipation Factor (tanδ, at 20°C, 120Hz)	Working Voltage(VDC)	6 10 16 25 35 50 63 100								
	D.F. (%)max.	16 14 12 10 9 8 8 8								
For capacitance>1000uF, add 2% per another 1000uF.										
Low Temperature Characteristics (at 120Hz)	Impedance ratio max									
	Working Voltage	6 10 16 25 35 50 63 100								
	Z(-25°C) / Z(+20°C)	4 3 3 3 3 3 2 2								
Z(-40°C) / Z(+20°C)	8 6 4 3 3 3 3 3									
Endurance	Test conditions	<table border="1"> <tr> <th>Dφ</th> <th>Life hours</th> </tr> <tr> <td>5-6.3φ</td> <td>2000</td> </tr> <tr> <td>8φ</td> <td>3000</td> </tr> <tr> <td>≥10φ</td> <td>5000</td> </tr> </table>	Dφ	Life hours	5-6.3φ	2000	8φ	3000	≥10φ	5000
	Dφ	Life hours								
5-6.3φ	2000									
8φ	3000									
≥10φ	5000									
Duration time :as right Ambient temperature :+105°C Applied voltage :Rated DC working voltage After test requirement at +20°C Capacitance change :≅ ±20% of the initial measured value Dissipation factor :≅ 200% of the initial specified value Leakage current :≅ The initial specified value										
Shelf Life	Test conditions									
	Duration time :1000Hrs Ambient temperature :+105°C Applied voltage :None After test requirement at +20°C: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)	50(60)	120	400	1K	10K	50K~100K
CAP ≅ 10	0.47	0.59	0.76	0.85	0.97	1.0
10 < CAP ≅ 100	0.52	0.62	0.80	0.89	0.97	1.0
100 < CAP ≅ 1000	0.58	0.72	0.84	0.90	0.98	1.0
1000 < CAP	0.63	0.78	0.87	0.91	0.98	1.0

Diagram of



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 < 16	D=16		D=18		D > 18
		L: 25-35.5	L < 25 and L ≅ 40	L: 25-31.5	L < 25 and L ≅ 35.5	
	1.5	1.5	2.0	1.5	2.0	2.0

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mA rms/105 °C /100KHz)	Max ESR(Ω) at 20°C /100kHz	WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mA rms/105 °C /100KHz)	Max ESR(Ω) at 20°C /100kHz
6.3	100	5x11	200	0.400	16	150	6.3x11	385	0.210
6.3	120	5x11	210	0.380	16	180	8x11.5	520	0.190
6.3	150	5x11	225	0.350	16	220	8x11.5	575	0.140
6.3	180	6.3x11	300	0.320	16	270	8x11.5	600	0.120
6.3	220	6.3x11	360	0.250	16	330	8x11.5	740	0.080
6.3	270	6.3x11	377	0.240	16	390	8x16	790	0.075
6.3	330	6.3x11	395	0.200	16	470	8x16	990	0.062
6.3	390	8x11.5	576	0.140	16	470	10x12.5	1000	0.058
6.3	470	8x11.5	600	0.095	16	560	8x20	1070	0.057
6.3	560	8x16	720	0.087	16	680	8x20	1120	0.055
6.3	680	8x16	800	0.080	16	680	10x16	1280	0.052
6.3	680	10x16	814	0.084	16	820	10x20	1400	0.048
6.3	820	8x20	970	0.070	16	1000	10x20	1840	0.035
6.3	1000	10x12.5	1000	0.055	16	1200	10x25	1920	0.032
6.3	1200	8x20	1150	0.048	16	1500	10x25	2050	0.030
6.3	1200	10x16	1180	0.050	16	1500	13x20	2200	0.029
6.3	1500	10x20	1400	0.045	16	1800	13x20	2380	0.026
6.3	1500	10x25	1560	0.043	16	2200	13x25	2750	0.022
6.3	1800	10x20	1500	0.041	16	2700	13x25	3000	0.022
6.3	2200	10x25	1720	0.037	16	3300	13x35	3490	0.018
6.3	2200	13x20	1890	0.039	16	3900	16x25	3520	0.018
6.3	2700	13x20	2080	0.034	16	4700	16x31.5	3770	0.017
6.3	3300	13x20	2290	0.026	25	39	5x11	210	0.420
6.3	3900	10x30	2450	0.024	25	47	5x11	240	0.350
6.3	3900	13x25	2670	0.022	25	56	5x11	256	0.310
6.3	4700	13x30	3200	0.021	25	68	6.3x11	300	0.280
6.3	5600	13x35	3270	0.020	25	82	6.3x11	350	0.240
6.3	6800	16x31.5	3490	0.018	25	100	6.3x11	410	0.150
10	68	5x11	190	0.700	25	120	6.3x15	490	0.130
10	82	5x11	210	0.500	25	150	8x11.5	540	0.110
10	100	5x11	242	0.310	25	180	8x11.5	620	0.098
10	120	5x11	261	0.280	25	220	8x11.5	750	0.075
10	150	6.3x11	300	0.260	25	270	8x16	850	0.063
10	180	6.3x11	350	0.220	25	330	8x16	990	0.056
10	220	6.3x11	390	0.180	25	330	10x12.5	1010	0.054
10	270	6.3x15	460	0.160	25	390	10x12.5	1050	0.051
10	330	8x11.5	540	0.110	25	470	8x20	1260	0.045
10	390	8x11.5	620	0.095	25	470	10x16	1415	0.042
10	470	8x11.5	750	0.075	25	560	10x20	1450	0.040
10	560	8x16	870	0.072	25	680	10x20	1570	0.035
10	680	8x20	1010	0.068	25	820	10x25	1910	0.032
10	820	8x20	1030	0.065	25	1000	13x20	2340	0.025
10	1000	8x20	1220	0.050	25	1200	13x20	2390	0.025
10	1000	10x16	1400	0.042	25	1500	13x25	2710	0.023
10	1200	10x20	1560	0.035	25	1800	13x30	3150	0.021
10	1500	10x20	1670	0.032	25	2200	13x35	3420	0.018
10	1800	10x25	2000	0.028	25	2700	16x31.5	3480	0.018
10	2200	13x20	2370	0.025	25	3300	16x31.5	3600	0.018
10	2700	13x20	2400	0.023	35	33	5x11	230	0.320
10	3300	13x25	2720	0.021	35	39	6.3x11	277	0.310
10	3900	13x30	3000	0.020	35	47	6.3x11	340	0.200
10	4700	13x35	3450	0.019	35	56	6.3x11	375	0.200
10	5600	16x31.5	3460	0.018	35	68	6.3x11	400	0.190
10	6800	16x31.5	3630	0.016	35	82	8x11.5	480	0.170
16	47	5x11	200	0.400	35	100	8x11.5	560	0.150
16	56	5x11	220	0.380	35	120	8x11.5	585	0.130
16	68	5x11	230	0.350	35	150	8x11.5	680	0.110
16	82	5x11	260	0.310	35	180	8x16	810	0.098
16	100	6.3x11	360	0.250	35	220	8x16	1000	0.056
16	120	6.3x11	365	0.230	35	220	10x12.5	1060	0.052

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mArms/105 °C /100KHz)	Max ESR(Ω) at 20°C /100kHz	WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mArms/105 °C /100KHz)	Max ESR(Ω) at 20°C /100kHz
35	270	10x16	1190	0.050	63	330	13x25	1870	0.045
35	330	8x20	1210	0.041	63	390	13x25	1920	0.044
35	330	10x16	1400	0.038	63	470	13x30	2225	0.041
35	390	10x20	1550	0.035	63	470	16x20	1970	0.043
35	470	10x20	1850	0.034	63	560	16x25	2350	0.039
35	560	10x25	2040	0.031	63	680	16x31.5	2600	0.035
35	680	13x20	2260	0.029	63	820	16x31.5	2650	0.031
35	820	13x25	2630	0.021	63	1000	16x35.5	2780	0.026
35	1000	13x25	2780	0.019	63	1000	18x31.5	3230	0.028
35	1200	13x30	2950	0.019	100	4.7	5x11	105	1.600
35	1200	16x25	3150	0.018	100	5.6	5x11	116	1.490
35	1500	13x35	3350	0.018	100	6.8	5x11	120	1.450
35	1500	16x31.5	3600	0.017	100	10	6.3x11	170	0.700
35	1800	16x31.5	3670	0.016	100	15	8x11.5	255	0.610
35	2200	16x31.5	3750	0.015	100	18	8x11.5	270	0.560
35	2700	18x31.5	3850	0.014	100	22	8x11.5	320	0.480
50	22	5x11	220	0.350	100	27	8x11.5	340	0.390
50	27	6.3x11	265	0.340	100	33	8x16	400	0.310
50	33	6.3x11	280	0.320	100	39	8x16	425	0.290
50	39	6.3x11	300	0.280	100	39	10x12.5	440	0.270
50	47	8x11.5	360	0.200	100	47	10x12.5	450	0.250
50	56	8x11.5	385	0.190	100	56	10x16	540	0.210
50	68	8x11.5	400	0.170	100	68	10x20	630	0.180
50	82	8x11.5	550	0.120	100	82	10x20	720	0.150
50	100	8x11.5	730	0.075	100	100	10x25	890	0.120
50	120	8x16	770	0.073	100	120	10x25	900	0.120
50	120	10x12.5	790	0.072	100	120	13x20	980	0.110
50	150	10x12.5	870	0.068	100	150	13x20	1100	0.095
50	180	8x20	1060	0.055	100	180	13x25	1250	0.078
50	180	10x16	1090	0.055	100	220	13x30	1420	0.065
50	220	10x16	1385	0.045	100	220	16x20	1270	0.075
50	270	10x20	1500	0.043	100	270	13x35	1630	0.057
50	330	10x25	1850	0.032	100	270	16x25	1570	0.058
50	390	13x20	1910	0.031	100	330	13x40	1650	0.045
50	470	13x20	2000	0.030	100	390	16x31.5	1850	0.043
50	560	13x20	2150	0.028	100	470	16x35.5	1900	0.032
50	680	13x25	2490	0.026	100	470	18x31.5	1700	0.038
50	820	13x30	2770	0.025	100	560	16x40	2170	0.032
50	820	16x25	2960	0.024	100	560	18x31.5	2100	0.031
50	1000	16x25	3000	0.020	100	680	18x35.5	2400	0.029
63	10	5x11	135	0.950					
63	15	6.3x11	168	0.850					
63	18	6.3x11	170	0.820					
63	22	6.3x11	250	0.750					
63	27	6.3x11	260	0.550					
63	33	6.3x11	270	0.380					
63	39	8x11.5	320	0.350					
63	47	8x11.5	400	0.220					
63	56	8x11.5	420	0.220					
63	68	10x12.5	500	0.200					
63	82	8x16	540	0.170					
63	82	10x12.5	570	0.160					
63	100	10x12.5	720	0.140					
63	120	8x20	790	0.140					
63	120	10x16	835	0.130					
63	150	10x16	900	0.110					
63	180	10x20	1200	0.095					
63	220	10x25	1315	0.075					
63	270	13x20	1400	0.071					
63	330	10x30	1750	0.047					