SGF

SERIES (+105℃， High Ripple Current 高紋波，Low Impedance低阻抗品)

- Low impedance for high frequency.
- Life time: 2000~4000 hours at 105℃.

◆ SPECIFICATIONS

Item	Performance Characteristics	
Operating temperature range	-40 to +105℃	-25 to +105℃
Rated Working Voltage Range	6.3 to 100V	160 to 450V
Nominal Capacitance Range	1.0 to 18000μF	2.2 to 470μF
Capacitance Tolerance	±20(120Hz,+20℃)	
Leakage Current	I≤ 0.01CV or 3(μA)after 2minutes whichever is greater measured with rated working voltage applied at +20 ℃	I≤ 0.03CV (μA)after 2minutes at +20 ℃

Dissipation Factor tan δ(120Hz,+20℃)

Working Voltage(V)	6.3	10	16	25	35	50	63	100
tan δ(max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08

Working Voltage(V)	160~250	400~450
tan δ(max)	0.15	0.20

For capacitance value＞ 1000μF,add 0.02per another 1000μF

Low Temperature Characteristics

Impedance ratio max at 120Hz

Working Voltage(V)	6.3	10	16	25	35	50	63	100
Z-25℃/Z+20℃	4	3	2	2	2	2	2	2
Z-40℃/Z+20℃	8	6	4	3	3	3	3	3

Working Voltage(V)	160~250	400	450
Z-25℃/Z+20℃	3	5	6

High Temperature Loading

Test conditions

Duration:

ΦD	5~6.3	8~10	12.5~
Life	2000	3000	4000

Ambient temp : +105℃

Applied vlotage:Rated DC working voltage with max,ripple current.

Post test requirements at +20℃

Leakage current :≤Initial specified value

Cap . Change :≤ ±20%of Initial measured value

tan δ :≤ 150% of Initial specified value

Shelf Life

Test conditions

Duration : 1000 hours

Ambient temp : +105℃

Applied vlotage:(None)

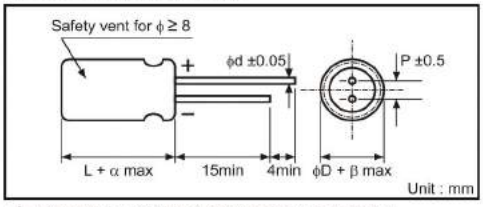
Post test requirements at +20℃

Leakage current :≤Initial specified value

Cap . Change :≤ ±20%of Initial measured value

tan δ :≤ 200% of Initial specified value

◆ CASE SIZE TABLE



ΦD	5	6.3	8	10	13	16	18	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	12.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	1.0
α	α	(L＜20)1.5 (L≥20)2.0							
β	β	(D＜20)0.5 (D≥20)1.0							

◆ RIPPLE CURRENT MULTIPLIER

(1) Frequency Coefficient

Cap(μf) \ freq.（Hz）	120	1k	10k	100k	
~180	0.40	0.75	0.90	1.00	
220~560	0.50	0.85	0.94	1.00	
680~1800	0.60	0.87	0.95	1.00	
2200~3900	0.75	0.90	0.95	1.00	
4700~18000	0.85	0.95	0.98	1.00	

(2) Tmperature Coefficient

Tmperature	-55	60	70	85	105
FACTOR	2.33	2.17	2.00	1.75	1.00

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◆ **DIMENSIONS**

Voltage	6.3V			10V			16V		
Cap(μF)	Case Size	Impedance	ipple Curre	Size	Imp	Ripple	Size	Imp	Ripple
10							5*11	3.000	39
22							5*11	1.900	75
33				5*11	2.000	110	5*11	1.150	130
47				5*11	0.630	152	5*11	0.500	198
56				5*11	0.580	175	5*11	0.380	232
68				5*11	0.400	200	5*11	0.320	265
82				5*11	0.360	237	5*11	0.280	306
100	5*11	0.450	210	5*11	0.320	264	5*11	0.240	328
							6.3*11	0.200	369
120	5*11	0.380	310				6.3*11	0.190	428
150	5*11	0.340	380	6.3*11	0.220	400	8*12	0.130	498
180	6.3*11	0.280	420	6.3*11	0.210	465	8*12	0.126	565
220	6.3*11	0.240	477	6.3*11	0.189	490	6.3*11	0.140	560
							8*12	0.121	602
270	6.3*11	0.220	540	8*12	0.125	612	8*12	0.108	650
330	6.3*11	0.190	582	8*12	0.112	656	8*12	0.100	680
390	8*12	0.130	640	8*12	0.098	789	10*12.5	0.080	815
470	6.3*11	0.220	647	6.3*11	0.106	721	8*12	0.098	750
				8*12	0.092	803	8*16	0.087	840
560	8*12	0.110	840	10*12.5	0.080	865	10*16	0.060	1210
680	8*16	0.087	840	8*16	0.087	840	8*20	0.069	1050
820	8*16	0.087	840	10*16	0.060	1210	10*20	0.060	1368
1000	8*12	0.096	786	10*12.5	0.080	887	10*16	0.050	1280
	10*12.5	0.080	865	8*20	0.069	1050	10*20	0.046	1400
1200	10*20	0.069	1050	10*20	0.046	1400	10*25	0.042	1650
1500	10*20	0.065	1280	10*20	0.044	1500	10*25	0.034	1800
	10*25	0.060	1400	10*25	0.042	1650	10*30	0.031	1910
1800	10*25	0.046	1650	12.5*20	0.046	1900	12.5*25	0.030	2124
2200	10*16	0.060	1420	10*20	0.045	1760	10*25	0.038	1980
	10*25	0.042	1650	10*30	0.031	1910	12.5*25	0.030	2124
2700	10*30	0.031	1910	12.5*25	0.030	2124	12.5*30	0.026	2524
3300	12.5*20	0.035	1900	12.5*30	0.026	2524	16*25	0.022	2743
3900	12.5*25	0.030	2124	12.5*35	0.022	2743	16*20	0.028	2552
4700	12.5*30	0.026	2524	12.5*40	0.019	3190	16*30	0.022	3029
5600	12.5*35	0.022	2742	16*25	0.028	2552	16*35	0.020	3124
6800	12.5*40	0.019	2552	16*30	0.022	3029	16*40	0.017	3886
8200	16*30	0.022	3029	16*35	0.020	3124	18*35	0.019	3638
10000	16*35	0.020	3124	18*35	0.019	3638	18*40	0.015	3781
12000	16*40	0.017	3886	18*40	0.015	3781			
15000	18*35	0.019	3638						
18000	18*40	0.015	3781						

Maximum Allowable Ripple Current (mA rms) at 105℃ 100KHz **Case Size ΦD X L (mm)**

Maximum Impedance (Ω) at 20℃ 100KHz

SGF

SERIES (+105℃， High Ripple Current 高紋波，Low Impedance低阻抗品)

◆ **DIMENSIONS**

Voltage	25V			35V			50V		
Cap(μF)	Size	Imp	Ripple	Size	Imp	Ripple	Size	Imp	Ripple
1							5*11	2.400	18
2.2							5*11	1.300	22
3.3							5*11	1.300	32
4.7							5*11	1.300	43
10	5*11	2.500	56	5*11	1.850	60	5*11	1.300	68
12	5*11	1.920	58	5*11	1.620	65	5*11	1.300	80
15	5*11	1.900	62	5*11	1.550	70	5*11	1.300	95
18	5*11	1.85	78	5*11	1.200	86	5*11	0.700	110
22	5*11	1.8	120	5*11	0.580	210	5*11	0.700	130
27	5*11	1.3	140	5*11	0.580	210	5*11	0.700	180
33	5*11	0.92	165	5*11	0.580	210	6.3*11	0.300	295
39	5*11	0.580	210	5*11	0.580	210	6.3*11	0.300	295
47	5*11	0.580	210	6.3*11	0.220	340	6.3*11	0.300	295
56	5*11	0.580	210	6.3*11	0.220	340	8*12	0.170	555
68				6.3*11	0.220	340	8*12	0.170	555
82	6.3*11	0.220	340	8*12	0.130	640	8*12	0.170	555
100	6.3*11	0.220	340	8*12	0.130	640	10*12.5	0.120	760
120	8*12	0.130	640	8*12	0.130	640	8*16	0.120	730
150	8*12	0.130	640	8*12	0.130	640	10*16	0.084	1050
180	8*12	0.130	640	10*12.5	0.080	865	8*20	0.091	920
220	8*12	0.130	640	8*12	0.110	680	10*16	0.074	1080
				8*16	0.087	840	10*20	0.060	1220
270	10*12.5	0.080	865	10*16	0.080	1210	10*25	0.055	1440
330	8*16	0.087	840	8*20	0.080	1050	10*30	0.043	1690
390	10*16	0.060	1210	10*20	0.069	1210	10*30	0.045	1660
470	8*14	0.092	890	10*12.5	0.075	1260	10*25	0.058	1410
	10*12.5	0.078	990	10*16	0.068	1320			
	8*20	0.069	1050	10*20	0.060	1400	12.5*20	0.043	1690
560	10*20	0.046	1400	10*25	0.046	1650	12.5*25	0.034	1950
680	10*20	0.046	1400	10*30	0.049	1450	12.5*30	0.030	2310
820	10*25	0.042	1650	12.5*25	0.038	2200	12.5*30	0.025	2510
1000	10*20	0.036	1720	10*25	0.036	2250	12.5*30	0.023	2680
	10*30	0.031	1910	12.5*25	0.030	2453	12.5*35	0.021	2920
1200	12.5*25	0.030	2124	12.5*30	0.026	2915	16*30	0.022	3010
1500	12.5*25	0.030	2124	12.5*35	0.022	3168	16*35	0.019	3150
1800	12.5*30	0.026	2524	18*20	0.034	2882	16*40	0.016	3710
2200	12.5*35	0.022	2743	16*30	0.022	3498	18*35	0.017	3680
2700	16*25	0.028	2495	16*35	0.020	3608	18*40	0.014	3800
3300	16*30	0.022	3029	18*35	0.019	4202	18*40	0.012	3935
3900	16*35	0.024	3124	18*40	0.015	4367	18*45	0.010	4038
4700	18*35	0.019	3638	18*45	0.012	4562	22*40	0.009	4386
5600	18*40	0.015	3781	22*40	0.009	4587	22*45	0.009	4562

Maximum Allowable Ripple Current (mA rms) at 105℃ 100KHz **Case Size ΦD X L (mm)**

Maximum Impedance (Ω) at 20℃ 100KHz

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◆ **DIMENSIONS**

Voltage	63V			100V			160V		
Cap(μF)	Size	Imp	Ripple	Size	Imp	Ripple	Size	Imp	Ripple
4.7				6.3*11	2.700	69	8*12	4.00	120
6.8				6.3*11	1.840	69			
10				8*12	1.200	138	10*12.5	3.00	162
12	5*11	1.840	55						
15				6.3*11	0.960	115			
18	5*11	1.840	55						
22	6.3*11	0.960	115	10*12.5	0.480	252	10*20	1.65	266
27				10*12.5	0.460	264			
33	6.3*11	0.960	115	8*16	0.420	286	12.5*20	1.07	366
39	8*12	0.504	232	8*16	0.360	300			
47	8*12	0.504	232	10*12.5	0.344	288	12.5*25	0.69	500
56	8*12	0.504	232	8*20	0.264	362			
68	8*12	0.504	232	10*16	0.248	357			
82	10*12.5	0.344	288	10*20	0.168	466			
100	8*16	0.360	300	10*25	0.160	531	16*25	0.36	675
120	10*16	0.248	357	10*30	0.120	663			
150	8*20	0.264	362	16*16	0.112	795			
180	10*20	0.168	466	12.5*25	0.096	784			
220	10*20	0.168	466	12.5*30	0.800	905	16*35	0.30	890
270	16*15	0.112	795	12.5*35	0.066	1050			
330	10*30	0.120	653	12.5*40	0.057	1180	18*35	0.25	1022
390	12.5*25	0.096	784	16*30	0.043	1570			
470	12.5*30	0.080	905	16*35	0.360	1790	18*40	0.18	1307
560	16*25	0.058	1250	18*40	0.032	2020			
680	12.5*35	0.066	1050	18*35	0.032	1790			
820	12.5*40	0.057	1180	18*40	0.029	2330			
1000	16*30	0.043	1570	22*40	0.023	2771			
1200	16*40	0.032	2020						
1500	18*35	0.032	1790						
1800	18*40	0.029	2330						

Maximum Allowable Ripple Current (mA rms) at 105℃ 100KHz **Case Size ΦD X L (mm)**

Maximum Impedance (Ω) at 20℃ 100KHz

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◆ DIMENSIONS

Voltage	160V			200V			250V		
Cap(μF)	Size	Imp	Ripple	Size	Imp	Ripple	Size	Imp	Ripple
2.2									
3.3	8*12	5.00	100				10*12.5	8.00	90
4.7	8*12	4.00	120	8*12	4.00	128	10*16	5.25	138
10	10*12.5	3.00	162	10*16	2.25	208	10*20	4.20	167
22	10*20	1.65	266	10*20	1.65	266	12.5*25	1.80	300
33	12.5*20	1.07	366	12.5*20	1.07	366	12.5*20	2.60	226
47	12.5*25	0.69	500	12.5*25	0.60	500	16*25	0.90	558
68	16*25	0.48	582	16*25	0.36	967	16*35	0.60	643
100	16*25	0.36	675	16*30	0.36	967	18*35	0.45	779
220	16*35	0.30	890	18*35	0.21	1142	18*40	0.41	833
470	18*40	0.18	1307	18*50	0.08	1380			

Maximum Allowable Ripple Current (mA rms) at 105℃ 100KHz　　Case Size ΦD X L (mm)

Maximum Impedance (Ω) at 20℃ 100KHz

Voltage	400V			450V					
Cap(μF)	Size	Imp	Ripple	Size	Imp	Ripple			
2.2	8*12	11.00	60	8*12	12.00	45			
3.3	10*12.5	6.00	88	10*17	6.20	55			
4.7	10*17	3.45	100	10*20	2.90	82			
	10*25	2.80	131	12.5*20	2.70	110			
10	10*17	4.80	118	10*20	4.20	107			
	10*20	2.90	132	10*25	2.30	120			
	12.5*20	1.68	197	12.5*25	2.10	160			
15	10*20	1.80	132	12.5*25	1.60	120			
22	16*25	1.22	458	16*30	1.00	380			
33	16*30	0.69	483	16*35	0.85	400			
47	18*30	0.50	517	16*35	0.69	420			
68	18*30	0.45	556	18*35	0.66	450			
82	18*35	0.40	602	18*40	0.62	505			
100	18*32	0.40	650	18*35	0.65	520			
	18*40	0.31	707	18*40	0.60	542			
120	18*40	0.28	763	18*45	0.56	596			
150	18*45	0.26	815	22*40	0.47	658			
220	22*40	0.22	982	25*40	0.40	713			
470	25*50	0.22	1028						

Maximum Allowable Ripple Current (mA rms) at 105℃ 100KHz　　Case Size ΦD X L (mm)

Maximum Impedance (Ω) at 20℃ 100KHz