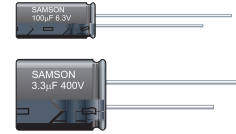


SGF Series

+105°C, High Ripple Current(高紋波), Low Impedance(低阻抗品)

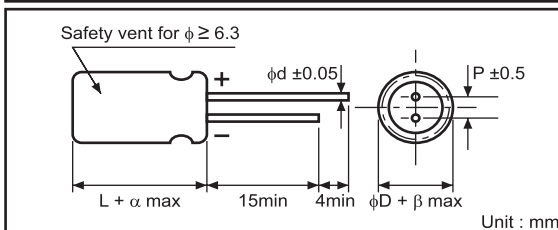
FEATURES

1. Low impedance for high frequency
2. Life time: 2000~4000 hours at 105°C



SPECIFICATIONS																												
Item	Performance Characteristics																											
Operating Temperature Range	-40 to +105°C -25 to +105°C																											
Rated Working Voltage Range	6.3 to 100V 160 to 450V																											
Nominal Capacitance Range	1 to 18000µF																											
Capacitance Tolerance	±20% (120Hz, +20°C)																											
Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ whichever is greater measured after 1 minute application of rated working voltage at +20°C $CV \leq 1000 : I = 0.1CV + 40(\mu A)$ max. $CV > 1000 : I = 0.04CV + 100(\mu A)$ max. after 1 minute application of rated working voltage at +20°C																											
Dissipation Factor tan δ (120Hz, +20°C)	<table border="1"> <tr> <td>Working Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>tan δ (max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </table>	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)	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																			
<table border="1"> <tr> <td>Working Voltage (V)</td> <td>160 ~ 250</td> <td>400 ~ 450</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>tan δ (max.)</td> <td>0.20</td> <td>0.24</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> For capacitance value > 1000µF, add 0.02 per another 1000µF	Working Voltage (V)	160 ~ 250	400 ~ 450							tan δ (max.)	0.20	0.24																
Working Voltage (V)	160 ~ 250	400 ~ 450																										
tan δ (max.)	0.20	0.24																										
Low Temperature Characteristics	Impedance ratio max. at 120Hz																											
	<table border="1"> <tr> <td>Working Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	Working Voltage (V)	6.3	10	16	25	35	50	63	100	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	Z-40°C / Z+20°C	8	6	4	3	3	3	3	3
	Working Voltage (V)	6.3	10	16	25	35	50	63	100																			
	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2																			
Z-40°C / Z+20°C	8	6	4	3	3	3	3	3																				
<table border="1"> <tr> <td>Working Voltage (V)</td> <td>160 ~ 250</td> <td>400</td> <td>450</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>5</td> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>4</td> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Working Voltage (V)	160 ~ 250	400	450						Z-25°C / Z+20°C	3	5	6						Z-40°C / Z+20°C	4	6							
Working Voltage (V)	160 ~ 250	400	450																									
Z-25°C / Z+20°C	3	5	6																									
Z-40°C / Z+20°C	4	6																										
High Temperature Loading	Test conditions Duration : <table border="1"><tr><td>φD</td><td>5 ~ 6.3</td><td>8 ~ 10</td><td>12.5 ~</td></tr><tr><td>Load life</td><td>2000h</td><td>3000h</td><td>4000h</td></tr></table> Ambient temp. : +105°C Applied voltage : Rated DC working voltage	φD	5 ~ 6.3	8 ~ 10	12.5 ~	Load life	2000h	3000h	4000h																			
	φD	5 ~ 6.3	8 ~ 10	12.5 ~																								
Load life	2000h	3000h	4000h																									
Post test requirements at +20°C Leakage current : ≤ Initial specified value Cap. change : within ±20% of initial measured value tan δ : ≤ 150% of initial specified value																												
Shelf Life	Test conditions Duration : 1000 hours Ambient temp. : +105°C Applied voltage : (None)																											
	Post test requirements at +20°C Same limits for high temperature loading.																											
Others	JIS C - 5141 JIS C - 5102																											

CASE SIZE TABLE



φD	5	6.3	8	10	12.5	16	18		
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5		
φd	0.5			0.6		0.8			
α	(L < 20) 1.5				(L ≥ 20) 2.0				
β	(D < 20) 0.5				(D ≥ 20) 1.0				

RIPPLE CURRENT MULTIPLIER

Temperature Coefficient						Frequency Coefficient					
Temperature(°C)	~ 55	60	70	85	105	Cap(µF)	Freq.(Hz)	120	1K	10K	100K
Factor	2.23	2.17	2.00	1.75	1.00	~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

SAMSON

SGF Series

+105°C, High Ripple Current(高紋波), Low Impedance(低阻抗品)

STANDARD RATINGS

Voltage (Code)		6.3V			10V			16V					
Cap.(μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current			
47	476							5 x 11	0.580	210			
56	566							5 x 11	0.580	210			
68	686							5 x 11	0.580	210			
82	826				5 x 11	0.580	210	5 x 11	0.580	210			
100	107	5 x 11	0.580	210	5 x 11	0.580	210	6.3 x 11	0.220	340			
120	127	5 x 11	0.580	210				6.3 x 11	0.220	340			
150	157	5 x 11	0.580	210	6.3 x 11	0.220	340	8 x 12	0.130	640			
180	187	6.3 x 11	0.220	340	6.3 x 11	0.220	340	8 x 12	0.130	640			
220	227	6.3 x 11	0.220	340	6.3 x 11	0.220	340	6.3 x 11	0.130	640			
					8 x 12	0.130	640	8 x 12					
270	277	6.3 x 11	0.220	340	8 x 12	0.130	640	8 x 12	0.130	640			
330	337	6.3 x 11	0.220	340	6.3 x 11	0.130	530	6.3 x 11	0.130	530			
		8 x 12	0.130	640	8 x 12		640	8 x 12		640			
390	397	8 x 12	0.130	640	8 x 12	0.130	640	10 x 12.5	0.080	865			
470	477	6.3 x 11	0.220	540	6.3 x 11	0.130	640	8 x 16	0.087	840			
		8 x 12	0.130	640	8 x 12			10 x 12.5	0.080	865			
560	567	8 x 12	0.130	640	10 x 12.5	0.080	865	10 x 16	0.060	1210			
680	687	8 x 16	0.087	840	8 x 16	0.087	840	8 x 20	0.069	1050			
					10 x 12.5	0.080	865	10 x 16	0.060	1210	10 x 16	0.060	1210
820	827	8 x 16	0.087	840	10 x 16	0.060	1210	10 x 20	0.046	1400			
		10 x 12.5	0.080	865				12.5 x 15	0.049	1450			
1000	108	10 x 12.5	0.080	865	8 x 12	0.069	1050	8 x 16	0.046	1400			
					8 x 14								
					8 x 16								
					8 x 20								
					10 x 12.5								
10 x 16	0.060	1210	10 x 20	0.040	1650								
1200	128	8 x 20	0.069	1050	10 x 20	0.046	1400	10 x 25	0.042	1650			
		10 x 16	0.060	1210	12.5 x 15	0.049	1450	16 x 15	0.050	1880			
1500	158	10 x 20	0.046	1400	8 x 20	0.042	1650	10 x 30	0.031	1910			
		12.5 x 15	0.049	1450	10 x 16			12.5 x 20	0.035	1900			
			10 x 20	10 x 25	16 x 15			0.055	1790				
1800	188	10 x 25	0.042	1650	12.5 x 20	0.046	1900	12.5 x 25	0.030	2124			
					16 x 15	0.050	1880	18 x 15	0.056	1924			
2200	228	10 x 25	0.042	1650	10 x 30	0.031	1910	12.5 x 25	0.030	2124			
		16 x 15	0.050	1880	12.5 x 20	0.035	1900	16 x 20	0.035	2210			
2700	278	10 x 30	0.031	1910	12.5 x 25	0.030	2124	12.5 x 30	0.026	2524			
		12.5 x 20	0.035	1900				18 x 15	0.051	2020	16 x 20	0.035	2210
		16 x 15	0.050	1880									
3300	338	12.5 x 20	0.035	1900	12.5 x 30	0.026	2524	12.5 x 35	0.022	2743			
		18 x 15	0.051	2020	16 x 20	0.035	2210	18 x 20	0.034	2459			
3900	398	12.5 x 25	0.030	2124	12.5 x 35	0.022	2743	16 x 25	0.028	2552			
					16 x 20	0.035	2210	18 x 20	0.034	2495			
4700	478	12.5 x 30	0.026	2524	12.5 x 40	0.019	3190	16 x 30	0.022	3029			
		16 x 20	0.035	2210	16 x 25	0.028	2552	18 x 25	0.024	2771			
5600	568	12.5 x 35	0.022	2743	16 x 25	0.028	2552	16 x 35	0.020	3124			
		16 x 20	0.035	2210	18 x 20	0.034	2495	18 x 30	0.020	3600			
6800	688	12.5 x 40	0.019	3190	16 x 30	0.022	3029	16 x 40	0.017	3886			
		16 x 25	0.028	2552							18 x 25	0.024	2771
8200	828	16 x 30	0.022	3029	16 x 35	0.020	3124	18 x 35	0.019	3638			
					18 x 30	0.020	3600						
10000	109	16 x 35	0.020	3124	18 x 35	0.019	3638	18 x 40	0.015	3781			
		18 x 25	0.024	2771									
12000	129	16 x 40	0.017	3886	18 x 40	0.015	3781						
		18 x 30	0.020	3600									
15000	159	18 x 35	0.019	3638									
18000	189	18 x 40	0.015	3781									

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

Case Size φD x L(mm)

Maximum Impedance (Ω) at 20°C 100KHz

SGF

Miniature Aluminum Electrolytic Capacitors

SGF Series

+105°C, High Ripple Current(高紋波), Low Impedance(低阻抗品)

STANDARD RATINGS														
Voltage (Code)		25V			35V			50V						
Cap.(μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current				
1	105							5 x 11	2.400	180				
2.2	225							5 x 11	1.300	180				
3.3	335							5 x 11	1.300	180				
4.7	475							5 x 11	1.300	180				
10	106							5 x 11	1.300	180				
12	126							5 x 11	1.300	180				
15	156							5 x 11	1.300	180				
18	186							5 x 11	0.700	180				
22	226				5 x 11	0.580	210	5 x 11	0.700	180				
27	276				5 x 11	0.580	210	5 x 11	0.700	180				
33	336				5 x 11	0.580	210	6.3 x 11	0.300	295				
39	396	5 x 11	0.580	210	5 x 11	0.580	210	6.3 x 11	0.300	295				
47	476	5 x 11	0.580	210	6.3 x 11	0.220	340	6.3 x 11	0.300	295				
56	566	5 x 11	0.580	210	6.3 x 11	0.220	340	8 x 12	0.170	555				
68	686				6.3 x 11	0.220	340	8 x 12	0.170	555				
82	826	6.3 x 11	0.220	340	8 x 12	0.130	640	8 x 12	0.170	555				
100	107	6.3 x 11	0.220	340	8 x 12	0.130	640	10 x 12.5	0.120	760				
120	127	8 x 12	0.130	640	8 x 12	0.130	640	8 x 16	0.120	730				
150	157	8 x 12	0.130	640	8 x 12	0.130	640	10 x 12.5	0.120	760				
180	187	8 x 12	0.130	640	10 x 12.5	0.080	865	8 x 20	0.091	910				
								10 x 16	0.084	1050				
220	227	6.3 x 11	0.130	640	8 x 12	0.087	840	10 x 20	0.060	1220				
		8 x 12			8 x 14									
		8 x 12			10 x 12.5			0.080			865	12.5 x 15	0.061	1260
270	277	10 x 12.5	0.080	865	10 x 16	0.060	1210	10 x 25	0.055	1440				
330	337	8 x 12	0.087	840	8 x 16	0.069	1050	10 x 30	0.043	1690				
		8 x 14												
		8 x 16			10 x 12.5			0.060			1210	12.5 x 20	0.045	1660
		10 x 12.5			10 x 16									
390	397	10 x 16	0.060	1210	10 x 20	0.046	1400	12.5 x 20	0.045	1660				
					12.5 x 15	0.049	1450	16 x 15	0.055	1690				
470	477	8 x 14	0.069	1050	10 x 16	0.046	1400	10 x 20	0.043	1690				
		8 x 16												
		8 x 20			10 x 30									
		10 x 16			12.5 x 20			0.034			1950			
560	567	10 x 20	0.046	1400	10 x 25	0.042	1650	12.5 x 25	0.034	1950				
		12.5 x 15	0.049	1450	12.5 x 20	0.038	1900	18 x 15	0.054	1930				
680	687	8 x 20	0.052	1345	10 x 30	0.035	1450	12.5 x 30	0.030	2310				
		10 x 16			12.5 x 20			0.038			1900			
		10 x 20			16 x 15			0.055			2068	16 x 20	0.034	2210
820	827	10 x 25	0.042	1650	12.5 x 25	0.030	2453	12.5 x 35	0.025	2510				
		12.5 x 20	0.035	1900	18 x 15	0.056	2222	18 x 20	0.036	2490				
1000	108	10 x 30	0.031	1910	12.5 x 25	0.030	2453	12.5 x 35	0.021	2920				
		12.5 x 20	0.035	1900	16 x 20	0.035	2552	16 x 25	0.025	2555				
		16 x 15	0.055	1790										
		12.5 x 25	0.030	2124	12.5 x 30			0.026			2915	16 x 30	0.022	3010
1200	128	18 x 15	0.056	1924	16 x 20	0.035	2552	18 x 25	0.026	2740				
1500	158	12.5 x 25	0.030	2124	12.5 x 35	0.022	3168	16 x 35	0.019	3150				
		16 x 20	0.035	2210	16 x 25	0.028	2948							
1800	188	12.5 x 30	0.026	2524	18 x 20	0.034	2882	16 x 40	0.016	3710				
		16 x 20	0.035	2210	12.5 x 40	0.019	3685	18 x 30	0.021	3635				
					16 x 25	0.028	2948							
		12.5 x 35			0.022	2743	16 x 30				0.022	3498		
2200	228	18 x 20	0.034	2495	18 x 25	0.024	3201	18 x 35	0.017	3680				
2700	278	16 x 25	0.028	2552	16 x 35	0.020	3608	18 x 40	0.014	3800				
					18 x 30	0.020	4158							
3300	338	16 x 30	0.022	3029	18 x 35	0.019	4202							
		18 x 25	0.022	2771										
		16 x 35	0.024	3124				18 x 40	0.015	4367				
3900	398	18 x 30	0.020	3600										
4700	478	18 x 35	0.019	3638										
5600	568	18 x 40	0.015	3781										

Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz Maximum Impedance (Ω) at 20°C 100KHz

Case Size φD x L(mm)

SAMSON

SGF Series

+105°C, High Ripple Current(高紋波), Low Impedance(低阻抗品)

STANDARD RATINGS																
Voltage (Code)		63V			100V			160V								
Cap.(μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current						
4.7	475							8 x 12	4.00	120						
6.8	685				5 x 11	1.840	55									
10	106							10 x 12.5	3.00	162						
								10 x 16	2.25	208						
12	126	5 x 11	1.840	55												
15	156				6.3 x 11	0.960	115									
18	186	5 x 11	1.840	55												
22	226	6.3 x 11	0.960	115	8X12	0.550	179	10 x 20	1.65	266						
27	276				8 x 12	0.504	232									
33	336	6.3 x 11	0.960	115				12.5 x 20	1.07	366						
39	396	8 x 12	0.504	232	8 x 16	0.360	300									
47	476	8 x 12	0.504	232	10 x 12.5	0.344	288	12.5 x 25	0.69	500						
56	566	8 x 12	0.504	232	8 x 20	0.264	362									
68	686	8 x 12	0.504	232	10 x 16	0.248	357									
82	826	10 x 12.5	0.344	288	10 x 20	0.168	466									
					12.5 x 16	0.184	466									
100	107	8 x 16	0.360	300	10 x 20	0.160	531	16 x 25	0.36	675						
		10 x 12.5	0.344	288	10 x 25											
120	127	10 x 16	0.248	357	10 x 30	0.120	663									
					12.5 x 20	0.128	690									
150	157	8 x 20	0.264	362	16 x 16	0.112	795									
180	187	10 x 20	0.168	466	12.5 x 25	0.096	784									
		12.5 x 15	0.184	466	18 x 16	0.096	920									
220	227	10 x 20	0.168	466	12.5 x 30	0.080	905	16 x 35	0.30	890						
		10 x 25	0.160	531							16 x 20	0.073	1040	18 x 35	0.21	1142
		12.5 x 20	0.128	690												
270	277	16 x 15	0.112	795	12.5 x 35	0.066	1050									
					16 x 25	0.058	1250									
330	337	10 x 30	0.120	663	12.5 x 40	0.057	1180									
		12.5 x 20	0.128	690	18 x 20	0.064	1240									
390	397	12.5 x 25	0.096	784	16 x 30	0.043	1570									
		18 x 15	0.096	920	18 x 25	0.046	1490									
470	477	12.5 x 30	0.080	905	16 x 35	0.036	1790	18 x 40	0.18	1307						
		16 x 20	0.073	1040	18 x 30	0.038	1630									
560	567	16 x 25	0.058	1250	18 x 40	0.032	2020									
680	687	12.5 x 35	0.066	1050	18 x 35	0.032	1790									
		16 x 25	0.058	1250												
		18 x 20	0.064	1240												
820	827	12.5 x 40	0.057	1180	18 x 40	0.029	2330									
		16 x 30	0.043	1570												
		18 x 25	0.046	1490												
1000	108	16 x 30	0.043	1570												
		16 x 35	0.036	1790												
1200	128	16 x 40	0.032	2020												
		18 x 30	0.038	1630												
1500	158	18 x 35	0.032	1790												
1800	188	18 x 40	0.029	2330												

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

Case Size φD x L(mm)

Maximum Impedance (Ω) at 20°C 100KHz

SGF Series

+105°C, High Ripple Current(高紋波), Low Impedance(低阻抗品)

STANDARD RATINGS										
Voltage (Code)		160V			200V			250V		
Cap.(μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
2.2	225									
3.3	335							10 x 12.5	8.00	90
4.7	475	8 x 12	4.00	120				10 x 16	5.25	138
10	106	10 x 12.5	3.00	162	10 x 16	2.25	208	10 x 20	4.20	167
		10 x 16	2.25	208						
22	226	10 x 20	1.65	266	10 x 20	1.65	266	12.5 x 25	1.80	300
33	336	12.5 x 20	1.07	366	12.5 x 20	1.07	366	12.5 x 20	2.60	226
								12.5 x 25	1.80	300
47	476	12.5 x 25	0.69	500	12.5 x 25	0.69	500	16 x 25	0.90	558
68	686									
100	107	16 x 25	0.36	675	16 x 30	0.36	967	18 x 35	0.45	779
220	227	16 x 35	0.30	890	18 x 35	0.21	1142	18 x 40	0.41	833
		18 x 35	0.21	1142						
470	477	18 x 40	0.18	1307	18 x 50	0.08	1380			

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

Case Size φD x L(mm)

Maximum Impedance (Ω) at 20°C 100KHz

Voltage (Code)		400V			450V					
Cap.(μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current			
2.2	227	8 x 12	10.00	52	8 x 12	12.00	45			
					10 x 16	7.90	110			
3.3	337	8 x 12	7.90	74	10 x 12.5	6.20	135			
		10 x 12.5	6.00	88	10 x 16					
4.7	475	8 x 12	6.50	112	10 x 12.5	4.50	155			
		10 x 12.5			10 x 16					
		10 x 16	5.50	150	10 x 20	3.70	180			
6.8	685	8 x 16	5.00	165	10 x 16	3.45	198			
		10 x 12.5			10 x 20					
		10 x 16	4.50	170	10 x 20	2.60	260			
10	106	10 x 16	3.45	183	10 x 20	2.60	260			
		10 x 20			10 x 25					
		10 x 25	3.25	300	12.5 x 20					
22	226	12.5 x 25	1.22	558	12.5 x 30	1.00	480			
33	336	16 x 25	0.69	583	16 x 30	0.62	660			
47	476	16 x 30	0.50	717	16 x 35	0.69	620			
68	686	18 x 30	0.45	855	18 x 30	0.60	710			
100	107	18 x 35	0.40	907	18 x 35	0.60	710			
220	227									
470	477									

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

Case Size φD x L(mm)

Maximum Impedance (Ω) at 20°C 100KHz