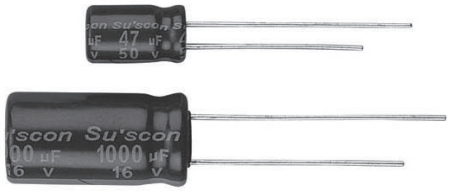
HG series

- High ripple current, low impedance at high frequency range.
- 105℃ 10000 hours long life .
- RoHS Compliance
- 高紋波電流、高頻低阻抗。
- 105℃ 10000小時長壽命產品。



SPECIFICATIONS

Items 項 目	Characteristics 特 性							
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20℃)							
Operating Temperature Range 適用溫度範圍	-40 ~ +105℃							
Rated Voltage Range 額定電壓範圍	6.3 ~ 100VDC							
Leakage Current 洩漏電流	I ≦ 0.01CV or 3 (μA) which is greater.(After 2 minutes application of DC rated voltage, at 20 ℃)							
Dissipation Factor 散逸因素(tan δ)	Measurement Frequency: 120Hz. Temperature: 20℃							
	Rated 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
	When nominal capacitance over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.							
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.							
	Rated 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
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple currrent is applied for varied hours according to varied ϕ and voltage [please refer to below sheet] at 105℃.							
	Case Size		ϕD ≦ 6.3		ϕD = 8, 10		ϕD ≧ 13	
	Rated Voltage(V)	6.3~10 V	4,000hours		6,000hours		8,000hours	
		16~100 V	5,000hours		7,000hours		10,000hours	
	Capacitance Change	Within ± 25% of Initial Value						
	tan δ	200% or less of Initial Specified Value						
	Leakage Current	Initial Specified Value or less						
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.							
	Capacitance Change	Within ± 20% of Initial Value						
	tan δ	200% or less of Initial Specified Value						
	Leakage Current	Initial Specified Value or less						
Standards 參照標準	JIS C 5101-4 (IEC 60384)							

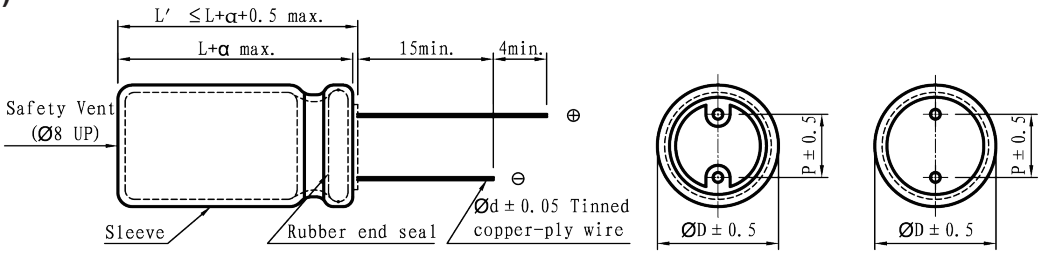
Frequency Coefficient of Permissible Ripple Current

Capacitance (μF)	Frequency (Hz)				
	50	120	300	1K	100K
≦ 33	0.50	0.55	0.70	0.90	1.00
47 ~ 330	0.60	0.70	0.85	0.95	1.00
470 ~ 1000	0.65	0.75	0.90	0.98	1.00
1200 ~ 18000	0.70	0.80	0.95	1.00	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use , the rms ripple current has to be reduced.

HG series

DIMENSIONS(mm)



φD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8

α	(L < 16) 1.0 (L ≧ 16) 2.0

STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 105℃ 100KHz ; IMP (Ω max)at 20℃,-10℃ 100KHz.

Cap (μF)	V	6.3				10			
	Item	D x L	IMP		R.C.	D x L	IMP		R.C
			20℃	-10℃			20℃	-10℃	
100						5x11	0.580	2.300	215
150		5x11	0.570	2.300	210	5x11	0.580	2.300	230
220		6.3x11	0.250	0.900	320	6.3x11	0.220	0.870	340
330		6.3x11	0.210	0.870	340	6.3x11	0.220	0.870	380
470		8x12	0.150	0.580	520	8x12	0.130	0.520	640
680		8x12	0.130	0.520	645	8x16	0.086	0.350	845
						10x13	0.080	0.310	865
820		10x13	0.080	0.320	865	10x16	0.070	0.280	1015
1000		8x16	0.085	0.350	870	8x20	0.068	0.270	1050
						10x16	0.060	0.240	1215
1200		8x20	0.071	0.260	1050	10x20	0.045	0.180	1410
		10x16	0.062	0.240	1215				
1500		10x20	0.045	0.180	1410	10x25	0.041	0.170	1610
						13x16	0.049	0.160	1450
1800		13x16	0.048	0.160	1460	13x21	0.039	0.150	1710
2200		10x25	0.042	0.170	1650	10x30	0.030	0.120	1920
						13x21	0.035	0.120	1910
						16x15	0.042	0.120	1900
2700		10x30	0.030	0.120	1900	18x15	0.042	0.110	2220
		16x15	0.041	0.120	1945				
3300		13x21	0.034	0.120	1900	13x25	0.026	0.089	2230
3900		13x25	0.026	0.088	2240	13x30	0.023	0.078	2660
		18x15	0.042	0.110	2210	16x22	0.026	0.078	2540
4700		13x30	0.023	0.078	2650	13x35	0.020	0.065	2890
5600		13x35	0.020	0.065	2890	13x40	0.016	0.055	3360
						16x26	0.020	0.060	2940
		16x22	0.026	0.077	2540	18x20	0.025	0.066	2870
6800		13x40	0.016	0.055	3350	16x32	0.016	0.050	3460
		16x26	0.020	0.060	2940				
		18x20	0.025	0.066	2870	18x25	0.018	0.049	3150
8200		16x32	0.016	0.050	3450	16x36	0.015	0.044	3610
						18x32	0.015	0.040	4180
10000		16x36	0.014	0.044	3620	16x40	0.013	0.038	4090
		18x25	0.018	0.049	3150	18x35	0.012	0.038	4230
12000		16x40	0.012	0.038	4090	18x40	0.011	0.032	4290
		18x32	0.014	0.040	4180				
15000		18x35	0.013	0.038	4230				
18000		18x40	0.012	0.032	4290				

※ 13mm may be replaced by 12.5mm upon customer's request.

HG series

STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 105℃ 100KHz ; IMP (Ω max)at 20℃,-10℃ 100KHz.

Cap (μF) \ V	16				25			
Item	D x L	IMP		R.C.	D x L	IMP		R.C
		20℃	-10℃			20℃	-10℃	
47					5x11	0.570	2.300	200
56	5x11	0.570	2.300	220	5x11	0.570	2.300	240
100	6.3x11	0.210	0.820	310	6.3x11	0.210	0.870	340
120	6.3x11	0.210	0.870	340				
220	8x12	0.190	0.850	510	8x12	0.120	0.520	650
330	8x12	0.120	0.520	650	8x16	0.087	0.350	850
					10x13	0.081	0.320	870
470	8x16	0.086	0.350	840	8x20	0.070	0.270	1050
	10x13	0.080	0.320	865	10x16	0.060	0.240	1210
680	8x20	0.069	0.270	1060	10x20	0.045	0.180	1410
	10x16	0.060	0.240	1210	13x16	0.049	0.160	1460
820	10x20	0.052	0.220	1310	10x25	0.041	0.170	1660
1000	10x20	0.045	0.180	1410	10x30	0.030	0.120	1920
					13x21	0.034	0.120	1910
	13x16	0.050	0.160	1450	16x15	0.042	0.120	1940
1200	10x25	0.043	0.170	1650	18x15	0.043	0.110	2220
1500	10x30	0.030	0.120	1920	13x25	0.026	0.089	2240
	13x21	0.035	0.120	1910				
	16x15	0.042	0.120	1940				
1800	13x25	0.028	0.095	2140	13x30	0.024	0.078	2660
					16x22	0.026	0.078	2540
2200	13x25	0.026	0.089	2240	13x35	0.020	0.065	2890
	18x15	0.042	0.110	2220	18x20	0.025	0.066	2870
2700	13x30	0.023	0.077	2650	13x40	0.016	0.056	3360
	16x22	0.026	0.078	2540	16x26	0.021	0.060	2940
3300	13x35	0.020	0.066	2890	16x32	0.016	0.050	3460
					18x25	0.018	0.048	3150
3900	13x40	0.016	0.056	3350	16x36	0.014	0.043	3620
	16x26	0.021	0.060	2930				
	16x22	0.025	0.067	2860	18x32	0.015	0.040	4180
4700	16x32	0.016	0.050	3450	16x40	0.014	0.044	4080
	18x25	0.018	0.049	3150	18x35	0.013	0.040	4230
5600	16x36	0.015	0.044	3620	18x40	0.011	0.032	4290
	18x32	0.015	0.040	4180				
6800	16x40	0.012	0.038	4080				
8200	18x35	0.014	0.038	4230				
10000	18x40	0.011	0.032	4290				

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HG series

STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 105℃ 100KHz ; IMP (Ω max)at 20℃,-10℃ 100KHz.

Cap (μF)	V	35				50			
	Item	D x L	IMP		R.C.	D x L	IMP		R.C
			20℃	-10℃			20℃	-10℃	
22						5x11	0.700	2.800	180
33		5x11	0.560	2.300	220				
47		6.3x11	0.350	1.400	280	6.3x11	0.380	1.500	220
56		6.3x11	0.210	0.860	340	6.3x11	0.300	1.200	300
100		8x12	0.150	0.560	510	8x12	0.160	0.670	560
120						8x16	0.120	0.480	740
150		8x12	0.130	0.520	650	10x13	0.120	0.480	770
180		8x16	0.086	0.350	800	8x20	0.090	0.360	920
220		8x16	0.086	0.350	850	10x16	0.083	0.340	1050
		10x13	0.080	0.320	865				
270		8x20	0.070	0.260	1060	10x20	0.060	0.240	1230
						13x16	0.062	0.200	1250
330		10x16	0.060	0.240	1210	10x25	0.053	0.220	1450
470		10x20	0.045	0.180	1410	10x30	0.043	0.170	1695
						13x21	0.044	0.150	1670
		13x16	0.048	0.150	1460	16x15	0.054	0.170	1695
560		10x25	0.041	0.160	1650	13x25	0.033	0.110	1950
						18x15	0.053	0.150	1940
680		10x30	0.030	0.120	1920	13x30	0.030	0.100	2320
		13x21	0.033	0.132	1910				
		16x15	0.041	0.143	1950				
820		13x25	0.028	0.088	2100	13x35	0.023	0.081	2520
						16x22	0.033	0.100	2220
1000		13x25	0.028	0.088	2230	13x40	0.020	0.069	2930
						16x26	0.025	0.075	2555
						18x20	0.036	0.097	2490
1200		13x30	0.023	0.078	2660	16x32	0.021	0.066	3020
		16x22	0.026	0.078	2530	18x25	0.025	0.070	2750
1500		13x35	0.020	0.065	2880	16x36	0.018	0.056	3150
1800		13x40	0.016	0.056	3350	16x40	0.016	0.048	3720
		16x26	0.020	0.060	2940	18x32	0.021	0.057	3640
		18x20	0.025	0.066	2870				
2200		16x32	0.016	0.050	3500	18x35	0.017	0.046	3690
		18x25	0.019	0.049	3140				
2700		16x36	0.015	0.044	3620	18x40	0.014	0.038	3810
		18x32	0.014	0.040	4180				
3300		16x40	0.013	0.038	4090				
		18x35	0.014	0.040	4230				
3900		18x40	0.012	0.033	4290				

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HG series

STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 105℃ 100KHz ; IMP (Ω max)at 20℃,-10℃ 100KHz.

Cap (μF)	V	63				100			
	Item	D x L	IMP		R.C.	D x L	IMP		R.C
			20℃	-10℃			20℃	-10℃	
6.8						5x11	2.200	9.200	56
15		5x11	2.200	9.200	56	6.3x11	1.200	5.000	120
27						8x12	0.72	3.000	235
33		6.3x11	1.200	5.000	120				
39						8x16	0.62	2.540	280
47		8x12	0.680	3.100	190	10x13	0.430	1.800	290
56		8x12	0.620	2.800	235	8x20	0.320	1.600	340
68						10x16	0.300	1.500	358
82		8x16	0.450	2.100	310	10x20	0.210	0.940	470
		10x13	0.430	1.800	300	13x16	0.230	1.100	468
100		10x16	0.350	1.800	320	10x25	0.200	0.840	536
120		8x20	0.330	1.600	362	10x30	0.150	0.710	666
		10x16	0.300	1.500	357	13x21	0.160	0.640	690
150						16x15	0.140	0.660	795
180		10x20	0.200	0.940	470	13x25	0.120	0.450	790
		13x16	0.230	1.100	465	18x15	0.120	0.500	930
220		10x25	0.200	0.840	531	13x30	0.110	0.450	905
						16x22	0.090	0.370	1050
270		10x30	0.150	0.700	663	13x35	0.082	0.350	1060
		13x21	0.160	0.640	690				
		16x15	0.130	0.650	795	16x26	0.072	0.270	1250
330		13x25	0.120	0.450	790	13x40	0.070	0.300	1190
						18x20	0.080	0.300	1250
390		18x15	0.120	0.500	920	16x32	0.053	0.200	1570
						18x25	0.056	0.210	1490
470		13x30	0.100	0.420	910	16x36	0.045	0.170	1790
		16x22	0.090	0.380	1040	18x32	0.047	0.170	1640
560		13x35	0.082	0.350	1050	16x40	0.040	0.150	2030
		16x26	0.073	0.270	1250				
680		13x40	0.070	0.300	1190	18x35	0.040	0.150	1790
		18x20	0.080	0.300	1240				
820		16x32	0.053	0.200	1580	18x40	0.036	0.130	2340
		18x25	0.057	0.210	1490				
1000		16x36	0.045	0.170	1790				
		18x32	0.047	0.170	1640				
1200		16x40	0.039	0.150	2020				
		18x35	0.040	0.150	1790				
1500		18x40	0.035	0.130	2340				

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