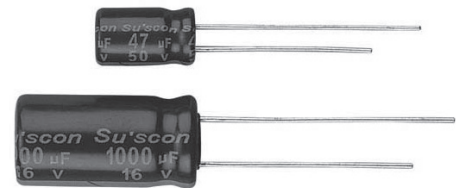


HGN series

- Anhydrous product.
- High ripple current, Low impedance at high frequency range.
- 105°C, long life 10000hours.
- RoHS Compliance
- 無水系產品。
- 高紋波電流、高頻低阻抗。
- 105°C 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°C)									
Operating Temperature Range 適用溫度範圍	-55 ~ +105°C					-40 ~ +105°C				
Rated Voltage Range 額定電壓範圍	6.3 ~ 50VDC					63 ~ 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 °C)									
Dissipation Factor 散逸因素(tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	
	tan δ(Max)	0.24	0.20	0.16	0.15	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°C)/Z(20°C)	4	3	2	2	2	2	2	2	
	Z(-40°C)/Z(20°C)	-	-	-	-	-	-	3	3	
Z(-55°C)/Z(20°C)	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°C after subjected to DC voltage with the rated ripple current is applied for varied hours according to varied ϕ and voltage [please refer to below sheet] at 105°C.									
	Case size			ϕ D ≤ 6.3			ϕ D = 8,10		ϕ D ≥ 13	
	Voltage	6.3 ~ 10 V		4,000 hours			6,000 hours		8,000 hours	
		16 ~ 100 V		5,000 hours			7,000 hours		10,000 hours	
	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°C after exposing t14be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.									
	Capacitance Change		Within ± 25% 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)									

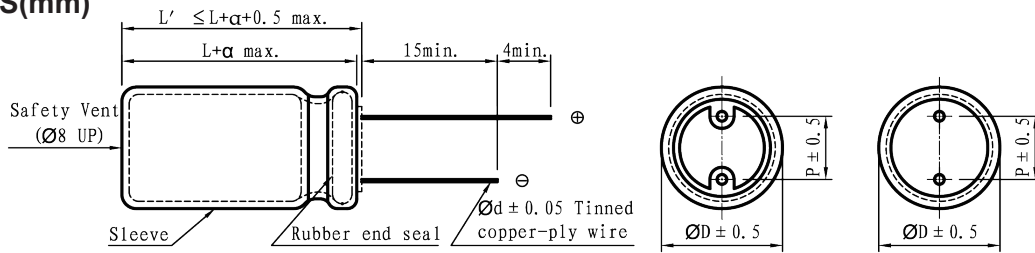
Frequency Coefficient of Permissible Ripple Current

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°C rise. When long life performance is required in actual use , the rms ripple current has to be reduced.

HGN 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
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STANDARD RATINGS

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

Cap (μF)	V	Item	6.3			10				
			D x L	IMP		R.C.	D x L	IMP		R.C.
				20°C	-10°C			20°C	-10°C	
100						5x11	0.640	2.530	215	
150		5x11	0.630	2.530	210	5x11	0.640	2.530	230	
220		6.3x11	0.280	0.990	320	6.3x11	0.250	0.960	340	
330		6.3x11	0.230	0.960	340	6.3x11	0.250	0.960	380	
470		8x12	0.170	0.640	345	8x12	0.150	0.580	640	
680		8x12	0.150	0.580	645	8x16	0.098	0.390	845	
						10x13	0.091	0.340	865	
820		10x13	0.091	0.360	865	10x16	0.080	0.310	1015	
1000		8x16	0.097	0.390	870	8x20	0.078	0.300	1050	
						10x16	0.069	0.270	1215	
1200		8x20	0.081	0.290	1050	10x20	0.053	0.200	1410	
		10x16	0.072	0.270	1215					
1500		10x20	0.053	0.210	1410	10x25	0.048	0.190	1610	
1800						13x21	0.046	0.170	1710	
2200		10x25	0.050	0.190	1650	10x30	0.036	0.140	1920	
						13x21	0.042	0.140	1910	
2700		10x30	0.036	0.140	1900					
3300		13x21	0.041	0.140	1900	13x25	0.032	0.100	2230	
3900		13x25	0.032	0.100	2240	13x30	0.029	0.089	2660	
4700		13x30	0.029	0.089	2650	13x35	0.025	0.075	2890	
5600		13x35	0.025	0.075	2890	13x40	0.021	0.064	3360	
						16x26	0.025	0.069	2940	
6800		13x40	0.021	0.064	3350	16x32	0.021	0.058	3460	
		16x26	0.025	0.069	2940	18x25	0.025	0.057	3150	
8200		16x32	0.021	0.058	3450	16x36	0.020	0.052	3610	
						18x32	0.020	0.047	4180	
10000		16x36	0.019	0.052	3620	16x40	0.018	0.045	4090	
		18x25	0.023	0.057	3150	18x35	0.017	0.045	4150	
12000		16x40	0.017	0.045	4090	18x40	0.015	0.039	4290	
		18x32	0.019	0.047	4180					
15000		18x35	0.018	0.045	4230					
18000		18x40	0.016	0.035	4290					

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

HGN series

STANDARD RATINGS

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

Cap (μF)	V Item	16				25			
		D x L	IMP		R.C.	D x L	IMP		R.C.
			20°C	-10°C			20°C	-10°C	
47						5x11	0.760	3.040	200
56		5x11	0.760	3.040	220	5x11	0.760	3.040	240
100		6.3x11	0.280	1.150	310	6.3x11	0.280	1.150	340
120		6.3x11	0.280	1.150	340				
220		8x12	0.250	1.130	510	8x12	0.160	0.690	650
330		8x12	0.160	0.690	650	8x16	0.120	0.470	850
	10x13					0.110	0.430	870	
470		8x16	0.120	0.470	840	8x20	0.096	0.360	1050
		10x13	0.110	0.430	865	10x16	0.083	0.320	1210
680		8x20	0.095	0.360	1060	10x20	0.064	0.240	1410
		10x16	0.083	0.320	1210				
820		10x20	0.073	0.290	1310	10x25	0.058	0.230	1660
1000		10x20	0.064	0.240	1410	10x30	0.043	0.160	1920
	13x21					0.049	0.160	1910	
1200		10x25	0.061	0.230	1650				
1500		10x30	0.043	0.160	1920	13x25	0.038	0.120	2240
		13x21	0.050	0.160	1910				
1800		13x25	0.041	0.130	2140	13x30	0.036	0.110	2660
2200		13x25	0.038	0.120	2240	13x35	0.030	0.090	2890
2700		13x30	0.035	0.110	2650	13x40	0.025	0.078	3360
	16x26					0.031	0.083	2940	
3300		13x35	0.030	0.091	2890	16x32	0.025	0.070	3460
	18x25					0.028	0.067	3150	
3900		13x40	0.031	0.078	3350	18x25	0.023	0.061	3620
		16x26	0.028	0.083	2930	18x32	0.024	0.056	4180
4700		16x32	0.025	0.070	3450	16x40	0.020	0.054	4090
		18x25	0.028	0.068	3150	18x35	0.022	0.054	4230
5600		16x36	0.024	0.062	3620	18x40	0.018	0.047	4290
		18x32	0.024	0.056	4180				
6800		16x40	0.020	0.054	4080				
8200		18x35	0.023	0.054	4230				
10000		18x40	0.018	0.047	4290				

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

HGN series

STANDARD RATINGS

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

Cap (μF)	V Item	35				50			
		D x L	IMP		R.C.	D x L	IMP		R.C.
			20°C	-10°C			20°C	-10°C	
22						5x11	1.540	6.16	180
33		5x11	0.690	2.780	220				
47		6.3x11	0.430	1.700	280	6.3x11	0.780	3.300	220
56		6.3x11	0.400	1.580	340	6.3x11	0.660	2.640	300
100		8x12	0.320	1.180	510	8x12	0.360	1.470	560
120						8x16	0.270	1.060	740
150		8x12	0.160	0.630	650	10x13	0.270	1.060	770
180						8x20	0.200	0.800	920
220		8x16	0.110	0.430	850	10x16	0.190	0.750	1050
		10x13	0.100	0.390	865				
270		8x20	0.088	0.320	1060	10x20	0.140	0.530	1230
330		10x16	0.076	0.290	1210	10x25	0.120	0.490	1450
470		10x20	0.058	0.220	1410	10x30	0.100	0.380	1695
	13x21					0.100	0.340	1670	
560		10x25	0.053	0.200	1650	13x25	0.080	0.250	1950
680		10x30	0.040	0.150	1920	13x30	0.072	0.230	2320
		13x21	0.044	0.160	1910				
820						13x35	0.058	0.180	2520
1000		13x25	0.037	0.110	2230	13x40	0.050	0.160	2930
						16x26	0.062	0.170	2555
1200		13x30	0.032	0.098	2660	16x32	0.052	0.150	3020
						18x25	0.062	0.160	2750
1500		13x35	0.028	0.083	2880	16x36	0.046	0.130	3150
1800		13x40	0.023	0.072	3350	16x40	0.042	0.110	3720
		16x26	0.028	0.076	2940	18x32	0.052	0.130	3640
2200		16x32	0.023	0.064	3500	18x35	0.044	0.100	3690
		18x25	0.026	0.063	3140				
2700		16x36	0.022	0.057	3620	18x40	0.038	0.090	3810
		18x32	0.021	0.052	4180				
3300		16x40	0.020	0.050	4090				
		18x35	0.021	0.050	4230				
3900		18x40	0.019	0.044	4290				

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

HGN series

STANDARD RATINGS

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

Cap (μF)	V Item	63			100				
		D x L	IMP		R.C.	D x L	IMP		
			20°C	-10°C			20°C	-10°C	
6.8					5x11	2.780	11.640	56	
15		5x11	2.20	9.20	56	6.3x11	1.520	6.330	120
27						8x12	0.980	4.390	235
33		6.3x11	1.20	5.00	120				
39						8x16	0.570	2.660	280
47		8x12	0.68	3.10	190	10x13	0.550	2.280	290
56		8x12	0.62	2.80	235	8x20	0.410	2.020	330
68						10x16	0.380	1.900	358
82		8x16	0.45	2.10	310	10x20	0.270	1.190	470
		10x13	0.43	1.80	300				
100		10x16	0.35	1.80	320	10x25	0.260	1.070	536
120		8x20	0.33	1.60	362	10x30	0.190	0.900	666
		10x16	0.30	1.50	357	13x21	0.210	0.810	690
180		10x20	0.20	0.94	470	13x25	0.160	0.570	790
220		10x25	0.20	0.84	531	13x30	0.130	0.530	905
	16x22					0.120	0.470	1050	
270		10x30	0.15	0.70	663	13x35	0.110	0.450	1060
		13x21	0.13	0.65	690	16x26	0.095	0.340	1250
330		13x25	0.12	0.45	790	13x40	0.092	0.380	1190
390						16x32	0.071	0.260	1570
						18x25	0.075	0.270	1490
470		13x30	0.100	0.42	910	16x36	0.061	0.220	1790
	18x32					0.063	0.220	1640	
560		13x35	0.082	0.35	1050	16x40	0.054	0.190	2030
		16x26	0.073	0.27	1250				
680		13x40	0.070	0.30	1190	18x35	0.054	0.190	1790
820		16x32	0.053	0.20	1580	18x40	0.049	0.170	2340
		18x25	0.057	0.21	1490				
1000		16x36	0.045	0.17	1790				
		18x32	0.047	0.17	1640				
1200		16x40	0.039	0.15	2020				
		18x35	0.040	0.15	1790				
1500		18x40	0.035	0.13	2340				

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