

HX series

- 105°C High ripple and Low impedance, long life: 6,000~10,000 hours.
- Suited for LCD TV BLU Inverter, SMPS, IP-Board, Adaptor etc..
- 105°C高紋波, 低阻抗品, 壽命: 6,000~10,000 hours。
- 適用背光模組轉換器、開關電源、適配器等。



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	-40 ~ +105°C											
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 °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	80	100	120	
	tan δ (Max)	0.22	0.19	0.16	0.14	0.12	0.1	0.09	0.08	0.08	0.15	
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	80	100	100	
	Z(-25°C)/Z(20°C)	2	2	2	2	2	2	2	2	2	2	
	Z(-40°C)/Z(20°C)	3	3	3	3	3	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)	Life time										
		6.3V	10 ~ 50V	63 ~ 100V								
	ϕ 5 ~ ϕ 6.3	6,000hours	7,000hours	6,000hours								
	ϕ 8X12~8X14	8,000hours	9,000hours	8,000hours								
	ϕ 8x15L ~ 25L	9,000hours	10,000hours	9,000hours								
	ϕ 10x13L	9,000hours										
	ϕ 10x16L ~ 25L	10,000hours										
	> ϕ 10											
	Rated Voltage(V)	6.3~10 V					16~100 V					
Capacitance Change	Within ± 30% of Initial Value					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 them for 1,000 hours 105°C 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 5101-4-1 (IEC 60384)											

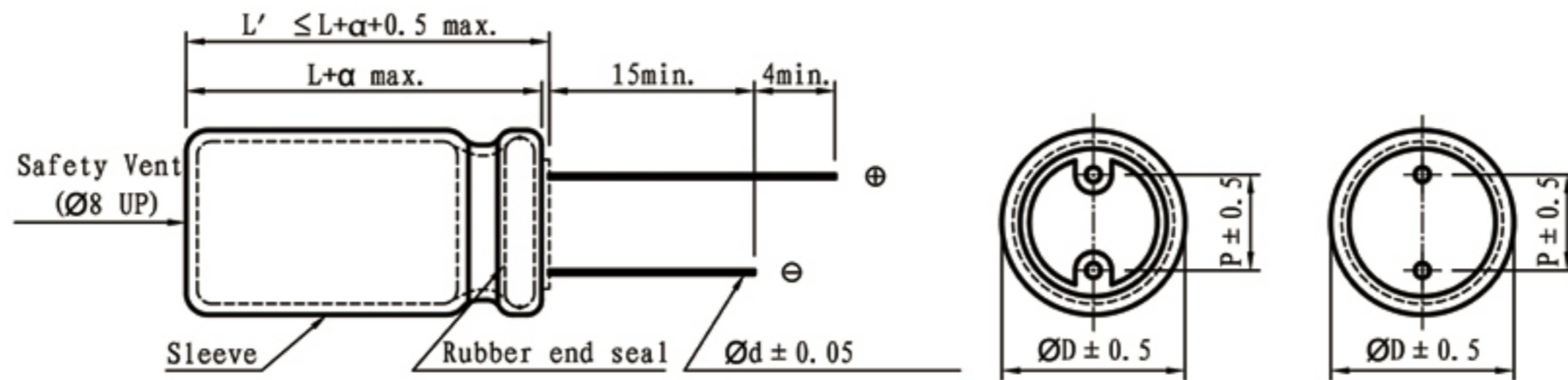
Frequency Coefficient of Permissible Ripple Current

Capacitance (µF)	Frequency (Hz)			
	120	1K	10K	100K
5.6 ~ 180	0.40	0.70	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

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.

HX series

DIMENSIONS(mm)



ϕD	5	6.3	8	10	13	16	18
P	2	2.5	3.5	5	5	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 \geq 16) 2.0
----------	-----------------------------------

STANDARD RATINGS

DxL(mm) ; R.C.(mA rms) at 105°C 100KHz ; IMP (Ω max)at 20°C 100KHz.

Cap (μF)	V Item	6.3			10			16			25		
		D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP
68											5x12	460	0.390
120								5x12	460	0.390			
150					5x12	460	0.390				6.3x12	690	0.160
220	5x12	350	0.390										
270								6.3x12	690	0.160			
330					6.3x12	690	0.160				8x12	1210	0.074
390											8x16	1610	0.058
470	6.3x12	530	0.180					8x12	1210	0.074	10x13	1690	0.052
560				8x12	1210	0.074		8x16	1610	0.058	8x20	1970	0.040
680				8x16	1610	0.058		10x13	1690	0.052	10x16	1990	0.037
820	8x12	940	0.074	10x13	1690	0.052		8x20	1970	0.040			
1000	8x16	1245	0.060	8x20	1970	0.040		10x16	1990	0.037	10x20	2520	0.027
1200	10x13	1510	0.052	10x16	1990	0.037					10x25	2910	0.023
1500	8x20	1510	0.042					10x20	2520	0.027	13x21	2610	0.024
1800	10x16	1765	0.037	10x20	2520	0.027		10x25	2910	0.023	13x25	3060	0.018
2200					10x25	2910	0.023	13x21	2610	0.024	13x30	3490	0.017
											16x22	3250	0.021
2700	10x20	1965	0.027	13x21	2610	0.024		13x25	3060	0.018	13x35	3650	0.016
3300	10x25	2260	0.023	13x25	3060	0.018		13x30	3490	0.017	16x25	3650	0.017
								16x22	3250	0.021			
3900	13x21	2485	0.024					13x35	3650	0.016			
4700	13x25	2910	0.019		13x30	3490	0.017	16x25	3650	0.017			
					16x22	3250	0.021						
5600	13x30	3455	0.017		13x35	3620	0.016						
					16x25	3650	0.017						
6800	13x35	3565	0.015										
	16x22	3245	0.021										
8200	16x26	3640	0.017										

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

HX series

STANDARD RATINGS

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

Cap (μF)	V	35			50			63		
		Item	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.
18								5x12	250	0.700
27					5x12	300	0.48			
33										
47		5x12	460	0.39				6.3x12	430	0.500
56					6.3x12	490	0.23	8x12	500	0.350
68										
82								8x12	720	0.350
100		6.3x12	690	0.16	8x12	940	0.13	8x16	990	0.300
120					8x16	1240	0.081	10x13	990	0.280
150					8x20	1600	0.057	8x20	1200	0.200
					10x13	1270	0.072			
180		8x12	1210	0.074				10x16	1200	0.100
220		8x16	1610	0.058	10x16	1645	0.052			
270		10x13	1690	0.052				10x20	1580	0.080
330		8x20	1970	0.04	10x20	2065	0.037	10x25	1990	0.075
390		10x16	1990	0.037	10x25	2250	0.031	13x21	1990	0.065
470					13x21	2210	0.032	13x25	2450	0.055
560		10x20	2520	0.027				13x30	2750	0.05
							16x22	2150	0.052	
680		10x25	2910	0.023	13x25	2510	0.026	13x35	3050	0.045
820		13x21	2610	0.024	13x30	3100	0.023	16x26	2560	0.048
					16x22	2750	0.026			
1000					13x35	3250	0.021			
					16x25	3000	0.022			
1200		13x25	3060	0.017						
1500		13x30	3490	0.017						
		16x22	3250	0.021						
1800		13x35	3620	0.016						
		16x25	3650	0.017						

Cap (μF)	V	80			100		
		Item	D x L	R.C.	IMP	D x L	R.C.
8.2					5x12	230	1.200
12		5x12	230	0.800			
18					6.3x12	360	0.580
27		6.3x12	380	0.550	8x12	450	0.430
33					8x12	630	0.430
47		8x12	630	0.400	8x16	780	0.400
56		8x16	780	0.380	10x13	780	0.330
68		10x13	780	0.300	8x20	1050	0.250
					10x16	1050	0.300
82		8x20	1050	0.230			
100		10x16	1050	0.270	10x20	1400	0.250
					13x16	1400	0.130
120					10x25	1650	0.085
150		10x20	1400	0.210	13x21	1750	0.078
		13x16	1400	0.110			
180		10x25	1650	0.130			
220		13x21	1750	0.063	13x25	2200	0.063
270		13x25	2200	0.060	13x30	2400	0.055
					16x22	1950	0.058
330		13x30	2400	0.053	13x35	2600	0.050
		16x22	1950	0.055			
390		13x35	2600	0.048	13x40	2860	0.045
					16x25	2450	0.043
470		13x40	2860	0.038	16x32	2650	0.038
					18x22	2270	0.048
					18x25	2500	0.042
560		16x32	2650	0.035	16x36	2860	0.036
					18x32	2860	0.036
680		16x36	2860	0.033	16x40	3500	0.033
		18x25	2500	0.039	18x36	3500	0.033
820		16x40	3500	0.030	18x40	3860	0.030
		18x32	2860	0.033			
1000		18x35	3500	0.030			

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