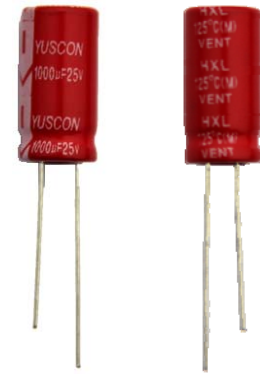


# Aluminum Electrolytic Capacitors



## HX-L Series

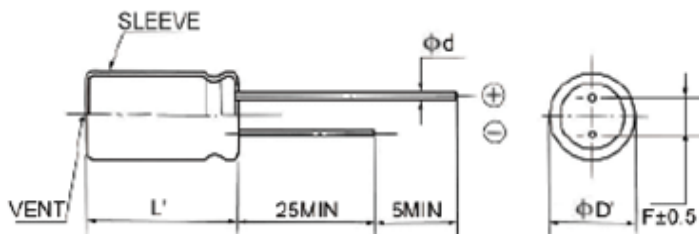
- Low Impedance, High Ripple Current, Long Life
- Endurance: 125°C 3000 hours.
- Have characteristics of withstanding high temperature 105°C and good reliability.
- Suitable for communication equipment and industrial measurement instruments, switching power supplies, etc.
- Rohs compliance.



### ◆ SPECIFICATIONS

Item	Characteristics									
Temperature Range	-40 to +125°C									
Rated Voltage Range	6.3 to 50 WV.DC									
Surge Voltage	W.V.	6.3	10	16	25	35	50			
	S.V.	8	13	20	32	44	63			at 25°C
Capacitance Tolerance	- 20%(M) ~ + 20% (at 25°C, 120Hz)									
Leakage Current	I = 0.01CV, whichever is greater. at 25°C After 1 minutes I: Max. Leakage Current (µA) C: Rated Capacitance (µF) V: Rated voltage (V)									
Dissipation Factor (tanδ)	Rated voltage (V)	6.3	10	16	25	35	50			
	Tanδ(Max)	22	20	16	14	12	10			at 25°C, 120Hz
Low Temperature Characteristics	Impedance ratio at 120Hz									
	Rated voltage (V)	6.3	10	16	25	35	50	63	100	
	Z-25°C/Z+20°C	2	2	2	2	2	2	2	2	
	Z-40°C/Z+20°C	3	3	3	3	3	3	3	3	
Endurance	The following specification shall be satisfied when the capacitors are restored to 20°C after subjected DC voltage with the rated ripple current is applied for 3000 hours at 125°C.									
	Capacitance Change	≅ ±20% of the initial value								
	Dissipation Factor	≅ 200% of the initial specified value								
Shelf Life	The following specification shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000hours at 105°C without voltage applied. (Reference JIS C 5102)									
	Capacitance Change	≅ ±20% of the initial value								
	Dissipation Factor	≅ 200% of the initial specified value								
	Leakage Current	≅ 200% of the initial specified value								

### ◆ DRAWING



ψD	5	6.3	8	10-13	16-18
ψd	0.5	0.6	0.6	0.6	0.8
F	2	2.5	3.5	5.3	7.5
ψD'	D + 0.5 max		D + 1.0 max		
L'	L + 1.5 max		L + 2.0 max		

### ◆ PART NUMBERING SYSTEM

HX-L	□□□	□	□□□	□	□□
Series	Rated Cap.	Cap. Tolerance	Rated Voltage	Case Size D	Case Size L

## HX-L Series

### ◆ FREQUENCY COEFFICIENT OF RATED RIPPLE CURRENT

Frequency	uF	120Hz	1KHz	10KHz~	100KHz~
Coefficient	47-220	0.50	0.70	0.92	1.00
	330-680	0.55	0.77	0.94	1.00
	820-1800	0.60	0.80	0.96	1.00
	2200-6800	0.70	0.85	0.98	1.00

### ■ STANDARD RATINGS

WV uF	6.3			10			16		
	DxL	R.C.	E.S.R	DxL	R.C.	E.S.R	DxL	R.C.	E.S.R
330	6.3 X 11	340		8 X 11	360	0.22	8 X 11	360	0.22
470	8 X 12	540	0.094	8 X 11	620	0.15	8 X 11	620	0.15
1000	10 X 13	1030	0.045	10 X 16	960	0.073	10 X 20	960	0.073
2200	10 X 25	2150	0.02	13 X 20	1430	0.04	13 X 25	1430	0.04
3300	13 X 20	2360	0.017	13 X 25	1900	0.038	13 X 35	2300	0.034
4700	13 X 30	3290	0.015	13 X 35	2300	0.034	16 X 30	2550	0.031
5600	13 X 35	3400	0.013	16 X 25					

WV uF	25			35			50		
	DxL	R.C.	E.S.R	DxL	R.C.	E.S.R	DxL	R.C.	E.S.R
47							6.3 x 11	300	0.28
100				8 x 11	360	0.22	8 x 11	520	0.18
220	8 x 11	360	0.22	8 x 16	620	0.15	10 x 16	890	0.082
330	8 x 14	620	0.15	10 x 16	800	0.1	10 x 20	1000	0.065
470	10 x 16	800	0.1	10 x 20	960	0.073	13 x 20	1200	0.051
1000	10 x 25	1100	0.055	13 x 25	1430	0.04	16 x 25	2180	0.037
2200	13 x 35	2300	0.034	16 x 25	2550	0.031	18 x 40	2800	0.029
3300	16 x 25	2550	0.031	16 x 30	2800	0.028			
4700	16 x 35	2800	0.028						

R.C. : Rated ripple current (mA rms) at 125°C ,impedance(E.S.R) at 20°C , 100kHz)