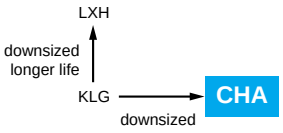
NIPPON CHEMI-CON

LARGE CAPACITANCE ALUMINUM ELECTROLYTIC CAPACITORS Overvoltage-proof design, 105℃

CHA Series

- No sparks against DC over-voltage
- Downsized from current KLG series
- Endurance with ripple current : 105℃, 2000hours
- Non solvent-proof type

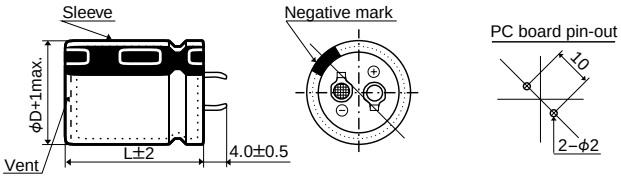


◆SPECIFICATIONS

Items	Characteristics			
Category Temperature Range	−25 to +105℃			
Rated Voltage Range	200 & 400Vdc			
Capacitance Tolerance	±20% (M)			(at 20℃, 120Hz)
Leakage Current	I=3√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (Vdc)			(at 20℃ after 5 minutes)
Dissipation Factor (tanδ)	200Vdc : 0.15 max. (0.20 max. for φD=35mm) 400Vdc : 0.15 max.			(at 20℃, 120Hz)
Low Temperature Characteristics (Max.Impedance Ratio)	Rated Voltage (Vdc)	200V	400V	
	Z(-25℃) / Z(+20℃)	4	4	
				(at 120Hz)
ESL	50nH max.			(at 20℃, 1MHz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for 2000 hours at 105℃.			
	Capacitance change	≦±20% of the initial value		
	D.F. (tanδ)	≦200% of the initial specified value		
	Leakage current	≦The initial specified value		
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hours at 105℃ without voltage applied.			
	Capacitance change	≦±15% of the initial value		
	D.F. (tanδ)	≦150% of the initial specified value		
	Leakage current	≦The initial specified value		

◆DIMENSIONS [mm]

- Standard Terminal Type : VSSN (φ22 to φ35)



*No plastic disk is the standard design.

◆PART NUMBERING SYSTEM

CHA 400 VSSN 100 M 25A

- 25A : Case code
- M : Cap tolerance (±20%)
- 100 : Nominal cap in μF
- VSSN : Terminal type
- 400 : Rated voltage in volts
- CHA : Series name

◆CASE CODE [mm]

Case code	Case size φDXL	Case code	Case size φDXL	Case code	Case size φDXL	Case code	Case size φDXL
22S	22×20						
22A	22×25	25A	25.4×25	30A	30×25	35A	35×25
22B	22×30	25B	25.4×30	30B	30×30	35B	35×30
22C	22×35	25C	25.4×35	30C	30×35	35C	35×35
22D	22×40	25D	25.4×40	30D	30×40		
		25E	25.4×45	30E	30×45		

◆RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Frequency (Hz)	50	120	300	1k	10k	50k
200 & 400Vdc	0.77	1.00	1.16	1.30	1.41	1.43

CAT. No. E1001D

CHA Series

◆STANDARD RATINGS

Vdc / μF \ φD	200			
	22	25.4	30	35
180	22×20 ← Upper : Case size φDXL (mm) 0.82 ← Lower : Rated ripple current (Arms) at 105℃, 120Hz			
220	22×20 0.90			
270	22×25 1.02			
330	22×30 1.20	25.4×25 1.20		
390	22×30 1.35	25.4×25 1.35		
470	22×35 1.45	25.4×30 1.45	30×25 1.47	
560	22×40 1.62	25.4×30 1.60	30×25 1.60	
680		25.4×35 1.82	30×30 1.81	35×25 1.86
820		25.4×45 2.11	30×35 2.11	35×25 2.11
1,000			30×35 2.40	35×30 2.40
1,200			30×45 2.69	35×35 2.65

Vdc / μF \ φD	400			
	22	25.4	30	35
56	22×20 ← Upper : Case size φDXL (mm) 0.45 ← Lower : Rated ripple current (Arms) at 105℃, 120Hz			
68	22×20 0.51			
82	22×25 0.58			
100	22×25 0.66	25.4×25 0.66		
120	22×30 0.76	25.4×25 0.76		
150	22×35 0.85	25.4×30 0.85	30×25 0.85	
180	22×40 0.94	25.4×35 0.95	30×25 0.95	
220		25.4×35 1.24	30×30 1.24	
270		25.4×45 1.30	30×35 1.30	35×25 1.30
330			30×40 1.47	35×30 1.47

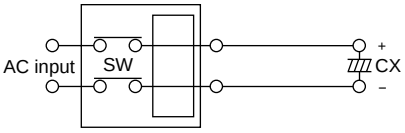
◆DC OVERVOLTAGE TEST CONDITIONS

The vent will operate and the capacitor shall become an open circuit without burning materials when the following excess DC voltage is applied.

●Test DC voltage

Rated Voltage	Nominal Capacitance	Current Limit	Test Voltage
200Vdc	<330μF	4A	300/375Vdc
	330≦C<470μF	5A	
	≧470μF	7A	
400Vdc	<100μF	2A	500/600Vdc
	100≦C<220μF	4A	
	≧220μF	7A	

●Test Circuit



Constant DC voltage/current power supply