

# ALUMINUM ELECTROLYTIC CAPACITORS

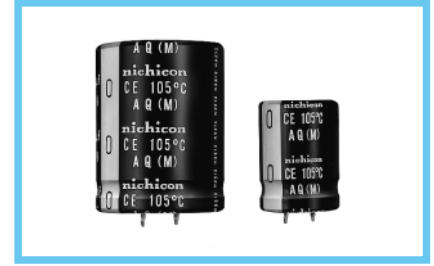
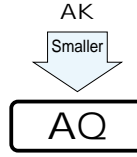
# AQ

Snap-in Terminal Type, Permissible Abnormal Voltage, Smaller-sized, Wide Temperature Range (692 type) series



Smaller

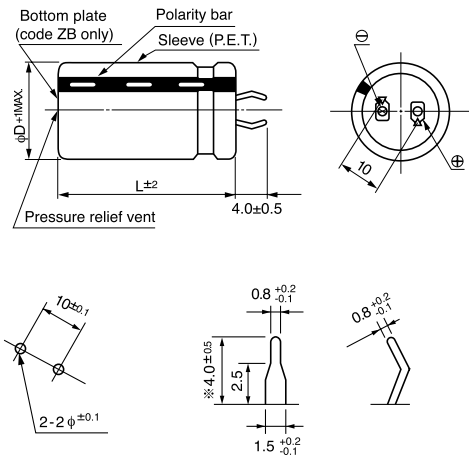
- Withstanding 2000 hours application of rated ripple current of 105°C.
- Extended voltage range at 200V, 220V and 400V.
- Smaller case sizes and higher ripple current than AK series.
- Improved safety features for abnormally excessive voltage.
- Ideally suited for the equipment used at voltage fluctuating area.
- Adapted to the RoHS directive (2002/95/EC).



## Specifications

Item	Performance Characteristics			
Category Temperature Range	-25 ~ +105°C			
Rated Voltage Range	200 · 220 · 400V			
Rated Capacitance Range	33 ~ 1500μF			
Capacitance Tolerance	±20% at 120Hz, 20°C			
Leakage Current	$I \leq 3\sqrt{CV}$ (μA) (After 5 minutes' application of rated voltage) [C : Rated Capacitance (μF) V : Voltage (V)]			
tan δ	0.20MAX. 120Hz, 20°C			
Stability at Low Temperature	Rated voltage(V)	200 · 220	400	Measurement frequency : 120Hz
	Impedance ratio (MAX) Z - 25°C/Z+20°C	8	8	
Endurance	After an application of DC voltage (in the range of rated DC voltage even after over-lapping the specified ripple current) for 2000 hours at 105°C, capacitors meet the characteristic requirements listed at right.	Capacitance change	Within ±20% of initial value	
		tan δ	200% or less of initial specified value	
		Leakage current	Initial specified value or less	
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the requirements listed at right.	Capacitance change	Within ±15% of initial value	
		tan δ	150% or less of initial specified value	
		Leakage current	Initial specified value or less	
Safety Performance	The pressure relief vent will operate in normal conditions, with no dangerous conditions such as flames, ignitions or dispersion of pieces of the capacitor and / or case.			
	Rating		Test conditions	
	Voltage (V)	Rated Capacitance (μF)	Limited DC current	Test voltage
	200	C < 330	4 A	300VDC and 375VDC
		330 ≤ C < 470	5 A	
		470 ≤ C	7 A	
220	C < 330	4 A	320VDC and 405VDC	
	330 ≤ C < 470	5 A		
	470 ≤ C	7 A		
400	C < 100	2 A	500VDC and 600VDC	
	100 ≤ C < 220	4 A		
	220 ≤ C	7 A		
Marking	Printed with white color letter on black sleeve			

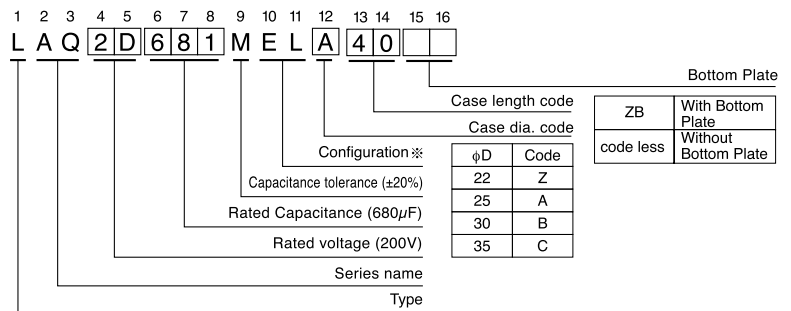
## Drawing



(PC board hole dimensions)

(Terminal dimensions)

## Type numbering system (Example : 200V 680μF)



※ Please contact to us if other configurations are required.

Minimum order quantity : 50pcs.

- Dimension table in next page.

## ■ Dimensions

Cap.(μF)	V(Code)	Code	φD	200V (2D)				220V (2P)				400V (2G)				
				22	25	30	35	22	25	30	35	22	25	30	35	
33	330											22×25				
												0.25				
39	390											22×25				
												0.30				
47	470											22×25				
												0.35				
56	560											22×25				
												0.45				
68	680											22×25				
												0.51				
82	820											22×30	25×25			
												0.58	0.58			
100	101						22×20					22×30	25×25			
							0.50					0.66	0.66			
120	121						22×25					22×35	25×30	30×25		
							0.60					0.76	0.76	0.76		
150	151						22×25	25×20				22×40	25×35	30×25		
							0.65	0.65				0.85	0.85	0.85		
180	181	22×25	25×20				22×25	25×25				25×40	30×30	35×25		
		0.70	0.70				0.70	0.70				0.95	0.95	0.95		
220	221	22×25					22×30	25×25	30×20			25×45	30×35	35×30		
		0.90					0.90	0.90	0.90			1.24	1.24	1.24		
270	271	22×25					22×35	25×30	30×25	35×20				30×40	35×35	
		1.00					1.00	1.00	1.00	1.00				1.30	1.30	
330	331	22×30	25×25				22×40	25×30	30×25	35×25				30×45	35×35	
		1.20	1.20				1.20	1.20	1.20	1.20				1.47	1.47	
390	391	22×35	25×30				22×45	25×35	30×30	35×25					35×40	
		1.35	1.35				1.35	1.35	1.35	1.35					1.59	
470	471	22×40	25×30	30×25				25×40	30×30	35×25					35×45	
		1.45	1.45	1.45				1.45	1.45	1.45					1.87	
560	561	22×45	25×35	30×30				25×45	30×35	35×30						
		1.60	1.60	1.60				1.60	1.60	1.60						
680	681	22×50	25×40	30×30	35×25				30×40	35×35						
		1.75	1.75	1.75	1.75				1.75	1.75						
820	821		25×50	30×35	35×30				30×45	35×40						
			2.11	2.11	2.11				2.11	2.11						
1000	102			30×45	35×35					35×45						
				2.40	2.40					2.40						
1200	122			30×50	35×40											
				2.65	2.65											
1500	152				35×45											Case size φD×L (mm)
					3.08											Rated ripple

Rated Ripple (Arms) at 105°C 120Hz

## ● Frequency coefficient of rated ripple current

Frequency (Hz)	50	60	120	1k	10k~	
Coefficient	200-220V	0.85	0.88	1.00	1.15	1.20
	400V	0.88	0.90	1.00	1.10	1.15