ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

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).

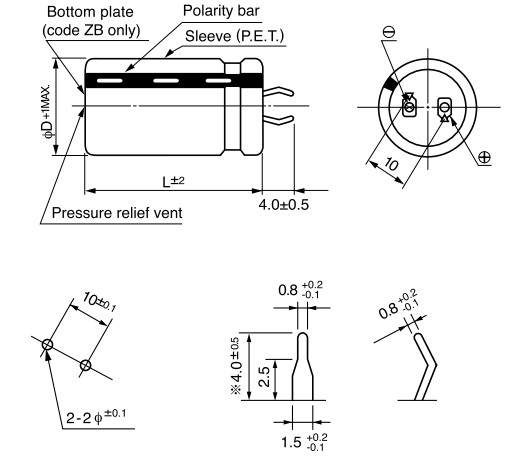
AK
Smaller
AQ



■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	$I \leqq 3\sqrt{CV}$ (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)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	A	Q	2	D	6	8	1	M	E	L	A	4	0		

- Bottom Plate
- Case length code
- Case dia. code
- Configuration※
- Capacitance tolerance (±20%)
- Rated Capacitance (680μF)
- Rated voltage (200V)
- Series name
- Type

Bottom Plate	
ZB	With Bottom Plate
code less	Without Bottom Plate

φD	Code
22	Z
25	A
30	B
35	C

※Please contact to us if other configurations are required.

Minimum order quantity : 50pcs.

● Dimension table in next page.

AQ series

■Dimensions

Cap.(μF)	Code	V(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