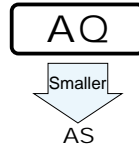


ALUMINUM ELECTROLYTIC CAPACITORS

AQ Wide Temperature Range, Permissible Abnormal Voltage
(Radial Lead Type) series

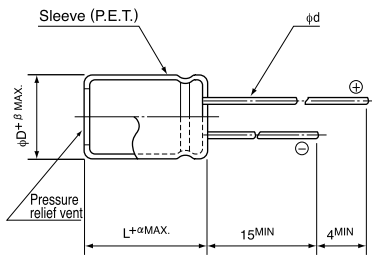
- Improved safety feature for abnormally excessive voltage.
- High ripple current product.
- Adapted to the RoHS directive (2002/95/EC).



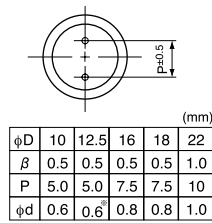
Specifications

Item	Performance Characteristics				
Category Temperature Range	-40 ~ +105°C				
Rated Voltage Range	200 - 400V				
Rated Capacitance Range	10 ~ 220μF				
Capacitance Tolerance	±20% at 120Hz, 20°C				
Leakage Current	After 1 minute's application of rated voltage, leakage current is 0.04CV+100 (μA) or less.				
tan δ	Rated voltage (V)	200	400	Measurement frequency:120Hz, Temperature:20°C	
	tan δ (MAX.)	0.15	0.15		
Stability at Low Temperature	Rated voltage (V)	200	400	Measurement frequency : 120Hz	
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C Z-40°C / Z+20°C	3 6		8 10
Endurance	After an application of D.C. bias voltage plus the rated ripple current for 2000 hours at 105°C the peak voltage shall not exceed the rated D.C. voltage, 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 specified value for endurance characteristics listed above.				
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.			Test conditions	
				Test Voltage	
	200	4A		300VDC and 375VDC	
	400	2A		500VDC and 600VDC	
Marking	Printed with white color letter on dark brown sleeve.				

Radial Lead Type



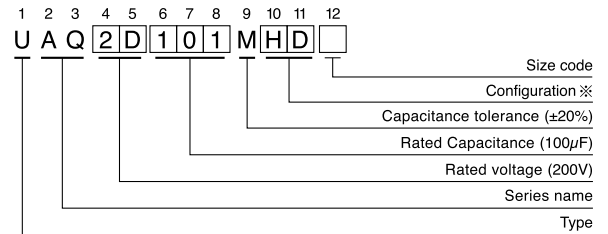
● Please refer to page 21 about the end seal configuration.



α	φD ≤ 18	2.0
	φD > 18	3.0

※ In case L>25 for φ12.5 (D) case sizes, lead diameter φ0.8 (d) will be applied.

Type numbering system (Example : 200V 100μF)



※ Configuration	
φ D	Pb-free leadwire Pb-free PET sleeve
10	PD
12.5~18	HD
22	RD

Dimensions

Cap.(μF)	V(Code)	Code	φD	200 (2D)					400 (2G)				
				φ10	φ12.5	φ16	φ18	φ22	φ12.5	φ16	φ18	φ22	
10	100	100								12.5 × 20 100			
22	220	220	10 × 20 120							12.5 × 31.5 145	φ16 × 20 145		
33	330	330	10 × 25 160	φ12.5 × 20 160						12.5 × 40 195	φ16 × 25 195	* 18 × 20 195	
47	470	470	10 × 31.5 195	φ12.5 × 20 195							16 × 35.5 280	φ18 × 25 280	
56	560	560		12.5 × 25 210							16 × 35.5 320	φ18 × 31.5 320	* 22 × 20 280
68	680	680		12.5 × 25 250							16 × 40 350	φ18 × 35.5 350	* 22 × 25 320
82	820	820		12.5 × 31.5 285	φ16 × 20 285							18 × 40 420	
100	101	101		12.5 × 35.5 335	φ16 × 25 335	* 18 × 20 335							
150	151	151			16 × 31.5 435	φ18 × 25 435	* 22 × 20 435						
180	181	181			16 × 35.5 495	φ18 × 31.5 495	* 22 × 25 495						
220	221	221				18 × 35.5 575							Case size φD×L (mm) Rated ripple

Rated Ripple (mArms) at 105°C 120Hz

- : In case of low profile type, [6] will be put at 12th digit of type numbering system.
- ※ : For further low profile product, [3] will be put at 12th digit.

Frequency coefficient of rated ripple current

Frequency	50, 60Hz	120Hz	300Hz	1kHz	10kHz ~
Coefficient	0.80	1.00	1.25	1.40	1.60

Please refer to page 21, 22, 23 about the formed or taped product spec.
Please refer to page 3 for the minimum order quantity.