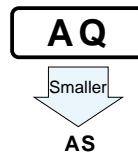


# ALUMINUM ELECTROLYTIC CAPACITORS



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

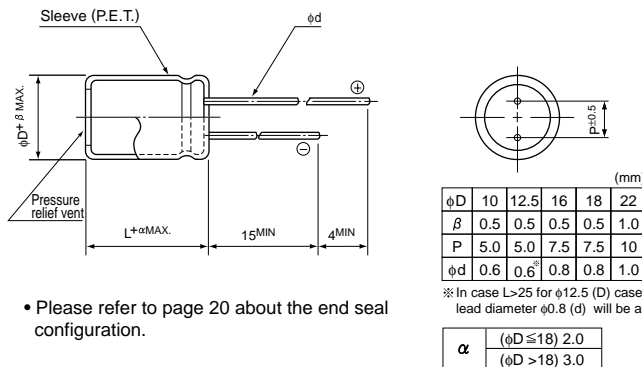
- Improved safety feature for abnormally excessive voltage.
- High ripple current product.
- Compliant to the RoHS directive (2011/65/EU).



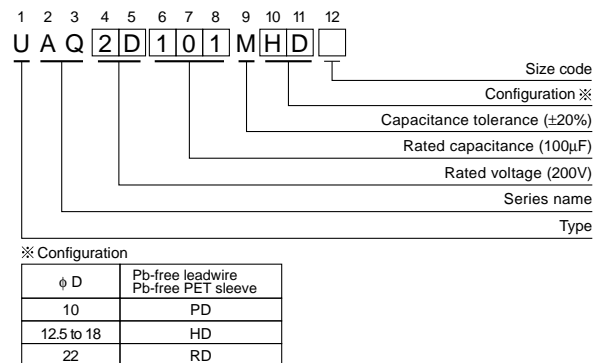
## Specifications

Item	Performance Characteristics				
Category Temperature Range	-40 to +105°C				
Rated Voltage Range	200 · 400V				
Rated Capacitance Range	10 to 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.				
Tangent of loss angle (tan δ)	Rated voltage (V)	200	400	Measurement frequency: 120Hz at 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 3	Z=-40°C / Z+20°C 8	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 2000 hours at 105°C, the peak voltage shall not exceed the rated voltage.			Capacitance change	Within ±20% of the initial capacitance value
				tan δ	200% or less than the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.			Leakage current	Less than or equal to the initial specified value
	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.				
Safety Performance	voltage (V)		Test conditions		
	200		Limited DC current	Test Voltage	
	400		4A	300VDC and 375VDC	
Marking	Printed with white color letter on dark brown sleeve.		2A	500VDC and 600VDC	

## Radial Lead Type



## Type numbering system (Example : 200V 100μF)



## Dimensions

Cap.(μF)	V(Code)	Code	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	* 22 × 20 280
56	560	560		12.5 × 25 210					16 × 35.5 320	φ18 × 31.5 320	* 22 × 25 320
68	680	680		12.5 × 25 250					16 × 40 350	φ18 × 35.5 350	
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

## Frequency coefficient of rated ripple current

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

- : 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.

Please refer to page 20, 21, 22 about the formed or taped product spec.  
Please refer to page 4 for the minimum order quantity.

CAT.8100C