



Wide Temperature Range, Miniature Type Permissible
Abnormal Voltage
series

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



Smaller

AQ



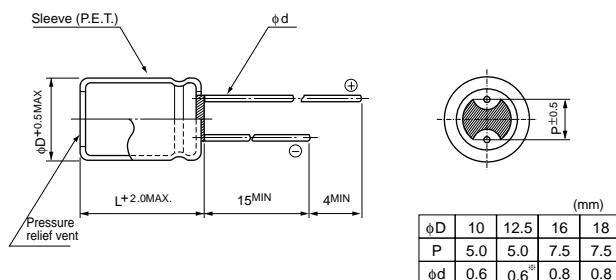
AS



■ Specifications

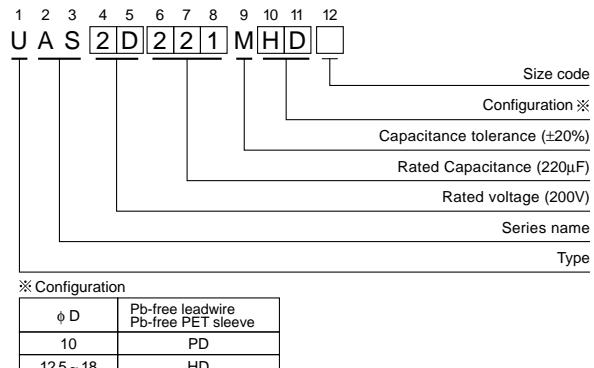
Item	Performance Characteristics		
Category Temperature Range	-40 ~ +105°C		
Rated Voltage Range	200V		
Rated Capacitance Range	33 ~ 330μF		
Capacitance Tolerance	±20% at 120Hz, 20°C		
Leakage Current	After 1 minute's application of rated voltage, leakage current is 0.04CV+100 (μA) or less.		
tan δ	Rated voltage (V)	200	Measurement frequency:120Hz, Temperature:20°C
	tan δ (MAX.)	0.15	
Stability at Low Temperature	Rated voltage (V)	200	Measurement frequency : 120Hz
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C Z-40°C / Z+20°C	3 6
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.		
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours, they 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.		
	voltage (V)	Limited DC current	Test conditions
	200	4A (5A : 330μF)	Test Voltage
Marking	Printed with white color letter on dark brown sleeve.		

■ Radial Lead Type



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

Type numbering system (Example : 200V 220μF)



■ Dimensions

Cap.(μF)	Code	φD	200 (2D)			Case size	Rated ripple
			10	12.5	16		
33	330	10	10 x 20	160			
47	470	10	10 x 25	195	▲ 12.5 x 20	195	
56	560			12.5 x 20	210		
68	680			12.5 x 25	320		
82	820			12.5 x 25	360		
100	101			12.5 x 31.5	430	▲ 16 x 20	430
150	151					16 x 25	460
180	181					16 x 31.5	600
220	221						18 x 31.5
270	271						18 x 35.5
330	331						18 x 40

Rated Ripple(mA rms) at 105°C 120Hz

▲: In this case, [6] will be put at 12th digit of type numbering system.

● 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.