

# ALUMINUM ELECTROLYTIC CAPACITORS

**PA** series  
Miniature Sized, Low Impedance,  
High Reliability For Switching Power Supplies



**NEW**

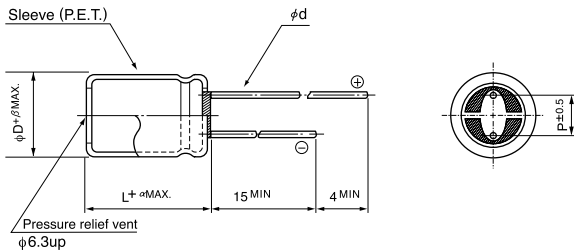
- Lower impedance than PW series.
- Smaller case size and high ripple current.
- Adapted to the RoHS directive (2002/95/EC).



## Specifications

Item	Performance Characteristics						
Category Temperature Range	-55 ~ +105°C						
Rated Voltage Range	6.3 ~ 35V						
Rated Capacitance Range	180 ~ 10000µF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current	After 1 minutes' application of rated voltage, leakage current is not more than 0.03CV or 4 (µA), whichever is greater.						
tan δ	Rated voltage (V)	6.3	10	16	25	35	120Hz 20°C
	tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	
For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF.							
Stability at Low Temperature	Rated voltage (V)	6.3	10	16	25	35	120Hz
	Impedance ratio ZT / Z20 (MAX.)	Z-55°C / Z+20°C	3	3	3	3	
Endurance	After an application of D.C. bias voltage plus the rated ripple current for 5000 hours ( 3000 hours for D = 8, 4000 hours for D = 10) at 105°C the peak voltage shall not exceed the rated D.C. voltage, capacitors meet the characteristic requirements listed below.						
	Capacitance change	Within ± 20% of initial value (6.3V, 10V : ±30%)					
	tan δ	200% or less of initial specified value (6.3V, 10V : 300%)					
	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.						
Marking	Printed with white color letter on dark brown sleeve.						

## Radial Lead Type

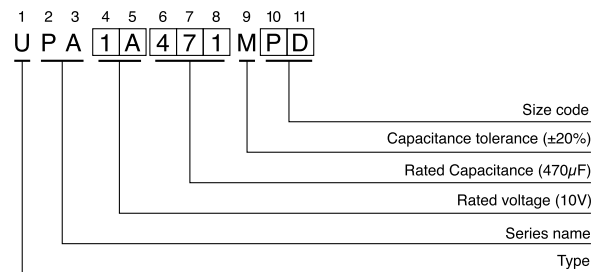


α	(L < 20)	1.5
	(L ≥ 20)	2.0

	(mm)				
φD	8	10	12.5	16	18
P	3.5	5.0	5.0	7.5	7.5
φd	0.6	0.6	*0.6	0.8	0.8
β	0.5	0.5	0.5	0.5	0.5

※ : In case L > 25 for the φ12.5 dia. unit, lead dia. φd = 0.8mm.

## Type numbering system (Example : 10V 470µF)



※ Configuration

φD	Pb-free leadwire Pb-free PET sleeve
8 - 10	PD
12.5 ~ 18	HD

## Frequency coefficient of rated ripple current

Cap. (µF)	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz~
180 ~ 330		0.55	0.65	0.75	0.85	1.00
390 ~ 1000		0.70	0.75	0.80	0.90	1.00
1200 ~ 10000		0.80	0.85	0.90	0.95	1.00

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

Please refer to page 20, 21 about the formed or taped product spec.  
Please refer to page 3 for the minimum order quantity.

- Dimension table in next page.

