

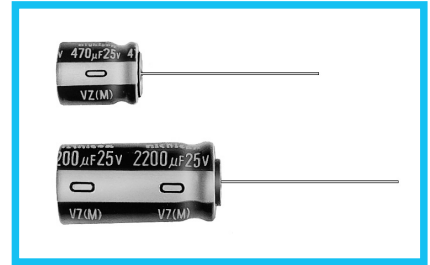
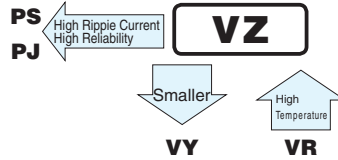
# ALUMINUM ELECTROLYTIC CAPACITORS

**VZ** series Wide Temperature Range



Anti-Solvent Feature  
(Through 100V only)

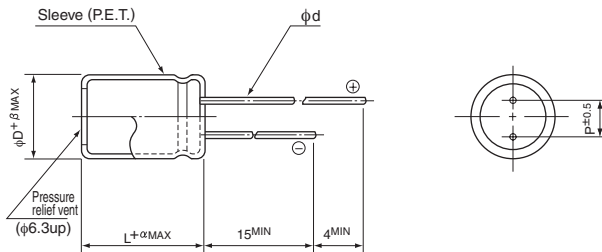
- Small case sizes as same as VR series, but operating over wide temperature range of  $-55$  to  $+105^{\circ}\text{C}$ .
- Compliant to the RoHS directive (2011/65/EU).



## Specifications

Item	Performance Characteristics	
Category Temperature Range	$-55$ to $+105^{\circ}\text{C}$ (6.3 to 100V), $-40$ to $+105^{\circ}\text{C}$ (160 to 400V), $-25$ to $+105^{\circ}\text{C}$ (450V)	
Rated Voltage Range	6.3 to 450V	
Rated Capacitance Range	0.1 to 33000µF	
Capacitance Tolerance	$\pm 20\%$ at 120Hz, $20^{\circ}\text{C}$	
Leakage Current	Rated voltage (V)	6.3 to 100
		160 to 450
Tangent of loss angle (tan $\delta$ )	For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF. Measurement frequency : 120Hz at $20^{\circ}\text{C}$	
	Rated voltage (V)	6.3 10 16 25 35 50 63 100 160 to 315 350 to 450
Stability at Low Temperature	Measurement frequency : 120Hz	
	Impedance ratio	Z $-25^{\circ}\text{C}$ / Z $+20^{\circ}\text{C}$ 5 4 3 2 2 2 2 2 3 4 6 15
Endurance	The specifications listed at right shall be met when the capacitors are restored to $20^{\circ}\text{C}$ after the rated voltage is applied for 1000 hours at $105^{\circ}\text{C}$ .	
	Capacitance change	tan $\delta$
Shelf Life	After storing the capacitors under no load at $105^{\circ}\text{C}$ for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at $20^{\circ}\text{C}$ , they shall meet the specified values for the endurance characteristics listed above.	
	Leakage current	
Marking	Printed with white color letter on black sleeve.	

## Radial Lead Type

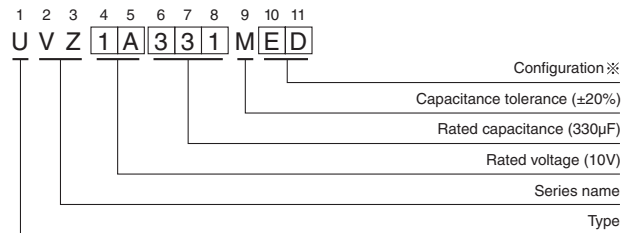


	(mm)										
φD	5	6.3	8	10	12.5	16	18	20	22	25	
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0	12.5	
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0	1.0	
β	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	

α	(L < 20)	1.5
	(L ≥ 20)	2.0

• Please refer to page 20 about the end seal configuration.

## Type numbering system (Example : 10V 330µF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 to 18	HD
20 to 25	RD

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

• Dimension table in next page.

