

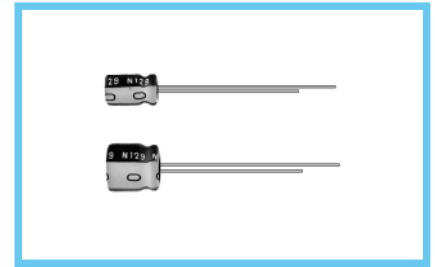
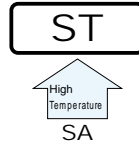
# ALUMINUM ELECTROLYTIC CAPACITORS

**ST** series 7mmL, Wide Temperature Range



Anti-Solvent Feature

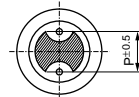
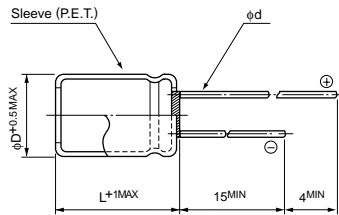
- Wide temperature range of  $-55 \sim +105^{\circ}\text{C}$ , with 7mm height.
- Adapted to the RoHS directive (2002/95/EC).



## Specifications

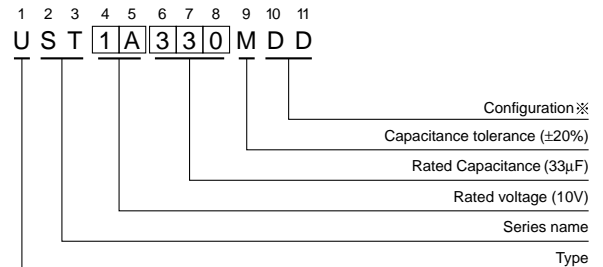
Item	Performance Characteristics																				
Category Temperature Range	$-55 \sim +105^{\circ}\text{C}$																				
Rated Voltage Range	6.3 ~ 50V																				
Rated Capacitance Range	0.1 ~ 220 $\mu\text{F}$																				
Capacitance Tolerance	$\pm 20\%$ at 120Hz, $20^{\circ}\text{C}$																				
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than $0.01\text{CV}$ or $3 (\mu\text{A})$ , whichever is greater.																				
tan $\delta$	Measurement frequency : 120Hz, Temperature : $20^{\circ}\text{C}$																				
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan <math>\delta</math> (MAX.)</td> <td>0.24</td> <td>0.21</td> <td>0.18</td> <td>0.15</td> <td>0.13</td> <td>0.12</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	tan $\delta$ (MAX.)	0.24	0.21	0.18	0.15	0.13	0.12						
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Stability at Low Temperature	Measurement frequency : 120 Hz																				
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ZT / Z20 (MAX.)	Z $-40^{\circ}\text{C}$ / Z $+20^{\circ}\text{C}$	6	5	4	3	3															
Endurance	After 1000 hours' application of rated voltage at $105^{\circ}\text{C}$ , capacitors meet the characteristic requirement listed at right.																				
	Capacitance change	Within $\pm 25\%$ of initial value (16V or less) Within $\pm 20\%$ of initial value (25V or more)																			
	tan $\delta$	200% or less of initial specified value																			
	Leakage current	Initial specified value or less																			
Shelf Life	After storing the capacitors under no load at $105^{\circ}\text{C}$ for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at $20^{\circ}\text{C}$ , they will meet the specified value for endurance characteristics listed above.																				
Marking	Printed with white color letter on black sleeve.																				

## Radial Lead Type



	(mm)			
$\phi D$	4	5	6.3	8
P	1.5	2.0	2.5	3.5
$\phi d$	0.45	0.45	0.45	0.5

## Type numbering system (Example : 10V 33 $\mu\text{F}$ )



※Configuration	
$\phi D$	Pb-free leadwire Pb-free PET sleeve
4 ~ 8	DD

## Dimensions

Cap. ( $\mu\text{F}$ )	Code	V		6.3		10		16		25		35		50	
0.1	0R1														
0.22	R22														
0.33	R33														
0.47	R47														
1	010														
2.2	2R2														
3.3	3R3														
4.7	4R7														
10	100														
22	220	4 × 7	34	5 × 7	38	5 × 7	44	6.3 × 7	51	6.3 × 7	57	6.3 × 7	57	8 × 7	65
33	330	5 × 7	42	5 × 7	47	6.3 × 7	57	6.3 × 7	63	6.3 × 7	63	8 × 7	72		
47	470	5 × 7	50	6.3 × 7	59	6.3 × 7	68	8 × 7	78						
100	101	6.3 × 7	77	8 × 7	96	8 × 7	107								
220	221	8 × 7	130	8 × 7	140										
														Case size $\phi D \times L$ (mm)	Rated ripple

## Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz ~
Coefficient	0.70	1.00	1.17	1.36	1.50

Rated Ripple (mA rms) at  $105^{\circ}\text{C}$  120Hz

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