

# ALUMINUM ELECTROLYTIC CAPACITORS

## TY series

### FEATURES

- 105°C Miniaturized Long life.



### SPECIFICATIONS

Item	Performance Characteristics														
Operating Temperature Range	-25°C ~ +105°C														
Rated Voltage Range	160V ~ 500 W.V.														
Capacitance Range	3.3~180uF														
Capacitance Tolerance	±20% (20°C, 120Hz)														
Leakage Current (MAX)	$I=0.04CV + 100\mu A$ (2minute) $I=0.02CV + 25\mu A$ (5minutes) $I$ =Leakage Current( $\mu A$ ) , $C$ =Nominal Capacitance( $\mu F$ ) , $V$ =Rated Voltage( $V$ )														
Dissipation Factor ( $\tan \delta$ )	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>200</th> <th>250</th> <th>400</th> <th>450</th> <th>500</th> <th>MAX</th> </tr> </thead> <tbody> <tr> <td><math>\tan \delta</math></td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>(20°C, 120Hz)</td> </tr> </tbody> </table>	Rated voltage (V)	200	250	400	450	500	MAX	$\tan \delta$	0.15	0.15	0.20	0.20	0.20	(20°C, 120Hz)
Rated voltage (V)	200	250	400	450	500	MAX									
$\tan \delta$	0.15	0.15	0.20	0.20	0.20	(20°C, 120Hz)									
Low Temperature Stability Impedance Ratio	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>200</th> <th>250</th> <th>400</th> <th>450</th> <th>500</th> <th>MAX</th> </tr> </thead> <tbody> <tr> <td><math>Z(-25^\circ C)/Z(+20^\circ C)</math></td> <td>3</td> <td>5</td> <td>8</td> <td>17</td> <td>17</td> <td>(120Hz)</td> </tr> </tbody> </table>	Rated voltage (V)	200	250	400	450	500	MAX	$Z(-25^\circ C)/Z(+20^\circ C)$	3	5	8	17	17	(120Hz)
Rated voltage (V)	200	250	400	450	500	MAX									
$Z(-25^\circ C)/Z(+20^\circ C)$	3	5	8	17	17	(120Hz)									
Load Life	After 2000 hours' application of rated voltage at 105°C, capacitors meet the characteristics requirement listed at right. <table border="1"> <tbody> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±25% of initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> </tbody> </table>	Leakage Current	Not more than the specified value.	Capacitance Change	Within ±25% of initial value.	Dissipation Factor	Not more than 200% of the specified value.								
Leakage Current	Not more than the specified value.														
Capacitance Change	Within ±25% of initial value.														
Dissipation Factor	Not more than 200% of the specified value.														
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours and applying voltage according to JIS C-5102 4-3, they meet the specified value for load life characteristics listed above.														
Standard	According to JIS C-5141														

### MULTIPLIER FOR RIPPLE CURRENT

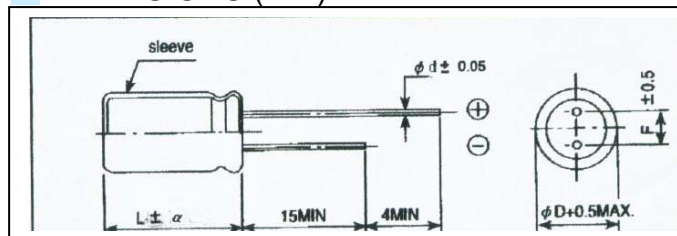
#### Frequency coefficient

Frequency(Hz)	60(50)	120	1k	10k	≥ 100k
Coefficient	0.8	1.0	1.25	1.40	1.50

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### DIMENSIONS (mm)



$\varphi D$	6.3	8	10	12.5	16	18
$\varphi d$	0.5	0.6	0.6	0.6	0.8	0.8
F	2.5	3.5	5.0	5.0	7.5	7.5
$\alpha$	$L \leq 16: \alpha = 1.5, \quad L \geq 20: \alpha = 2.0$					

### STANDARD SIZES AND PERMISSIBLE RIPPLE CURRENT

SIZE  $\varphi D \times L$ (mm) Ripple Current(mA 105°C) r.m.s

W.V		160		200		250		400		450		500	
		SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ
3.3	3R3	5x11	15	6.3x11	22	6.3x11	25	8x11.5	35	10x12.5	45	10x16	75
								8x16	41				
4.7	4R7	6.3x11	22	8x11.5	50	8x11.5	53	8x11.5	60	10x12.5	65	10x20	80
								10x16	70				
6.8	6R8	6.3x11	45	8x11.5	60	8x11.5	65	8x16	70	10x16	80	10x23	130
								10x12.5	72				
10	100	8x11.5	60	8x11.5	70	8x16	75	10x16	85	12.5x20	145	12.5x20	155
								10x20	90				
15	150	8x16	80	10x12.5	110	10x12.5	110	10x20	117	12.5x20	150	16x20	170
								12.5x16	120				
22	220	10x12.5	110	10x12.5	125	10x20	160	10x25	130	16x25	190	16x25	200
				10x16	145			10x28	140				
33	330	10x16	145	10x20	160	12.5x16	181	12.5x16	125	16x25	190	16x31.5	280
				10x16	165			10x40	200				
39	390	10x16	165	10x20	170	12.5x20	200	12.5x20	200	16x31.5	250	18x25	290
								12.5x16	181				
47	470	10x16	175	10x20	185	12.5x25	350	12.5x25	210	16x31.5	270	18x31.5	300
				10x23	188			13x25	230				
56	560	10x23	188	12.5x16	192	12.5x25	250	12.5x25	250	16x35.5	350	18x35.5	380
				12.5x20	200			12.5x30	250				
56	560	10x23	188	12.5x20	223	12.5x25	250	12.5x25	275	16x35.5	350	18x35.5	380
								12.5x25	282				
56	560	10x23	188	12.5x20	223	12.5x25	250	12.5x25	285	16x35.5	350	18x35.5	380
								12.5x25	285				
56	560	10x23	188	12.5x20	223	12.5x25	250	12.5x25	285	16x35.5	350	18x35.5	380
								12.5x25	285				
56	560	10x23	188	12.5x20	223	12.5x25	250	12.5x25	285	16x35.5	350	18x35.5	380
								12.5x25	285				

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SIZE  $\varphi$  DxL(mm)Ripple Current(mA 105°C) r.m.s

W.V Cap( $\mu$ F)		160		200		250		400		450		500	
		SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ	SIZE	RIPPLE 120HZ
68	680	12.5x20	223	12.5x20 16x20	253	16x25	320	12.5x35 16x30 16x31.5 18x20 18X25	325 325 325 325 367	16x31.5 16X35.5 18x30 18x31.5	350 360 380 380	18x40	400
82	820	12.5x25	250	12.5X25	290	16X25	330	12.5x40 18X25	470 375	18X31.5	390	18X45	410
100	101	16x20	300	16x20	340	16x31.5	365	18X25	430	18X35.5	490	20X46.5	550
110	111	16X20	320	16X20	360	16X31.5	380	12.5x50 18x31.5	490 470	18X35.5	510		
120	121	16x20	340	16x25	380	18x20	408	18X31.5 16X40	500 510	18X40	525		
150	151	16x25	380	16x31.5	460	18x25	500	18X35.5	548	18X45	840		
180	181	16x31.5	460	18x20	505	18x31.5	520	18X45	670	20X46.5	950		