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ALUMINUM ELECTROLYTIC CAPACITORS

TC Series Low Impedance & Long Life



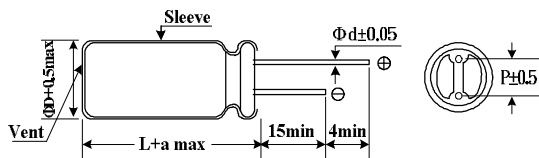
- Features : 105°C 6000~ 10000hrs Low Impedance and long Life
- Recommended Applications: Applicable for AV(TV, Video, Audio), OA/HA/Communication, SMPS, Adapter, Monitor/Computer, Converter/Inverter
- Corresponding product to RoHS

TC
↑
Long Life
TB

Specifications

Item	Characteristics																																								
Operating Temperature Range	-40 ~ +105°C																																								
Rated Voltage Range	6.3~ 100VDC																																								
Rated Capacitance Range	8.2 ~ 8200µF																																								
Capacitance Tolerance	± 20 % at 120Hz , 20°C																																								
Leakage Current (MAX) (20°C)	I = 0.01CV or 3(µA) , whichever is greater. (After rated voltage applied for 2 minutes) I = Leakage Current (µA) C= Nominal Capacitance (µF) V= Rated Voltage (V) (20°C)																																								
Dissipation Factor (MAX) (tanδ) (120Hz, 20°C)	<table border="1" style="width: 100%; text-align: center;"> <tr> <th>WV</th> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <th>tanδ</th> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> </tr> </table>	WV	6.3	10	16	25	35	50	63	80	100	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08																				
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tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08																																
When nominal capacitance is over 1000µF, Tanδ shall be added 0.02 to the listed value with increase of every 1000µF.																																									
Low Temperature Stability Impedance Ratio (MAX)	<table border="1" style="width: 100%; text-align: center;"> <tr> <th>WV</th> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <th>Z(120Hz)</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Z-25°C / Z+20°C</th> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <th>Z-40°C / Z+20°C</th> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	WV	6.3	10	16	25	35	50	63	80	100	Z(120Hz)										Z-25°C / Z+20°C	2	2	2	2	2	2	2	2	2	Z-40°C / Z+20°C	3	3	3	3	3	3	3	3	3
	WV	6.3	10	16	25	35	50	63	80	100																															
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Z-40°C / Z+20°C	3	3	3	3	3	3	3	3	3																																
Endurance	After applying rated voltage with rated ripple current for 6000~ 10000hours at 105°C, the capacitors shall meet the following requirements.																																								
	<table border="1" style="width: 100%;"> <tr> <td>Capacitance Change</td> <td>Within ± 25 % of initial value(6.3v,10v: ±30%)</td> </tr> <tr> <td>Dissipation Factor</td> <td>200% or less of initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>initial specified value or less</td> </tr> </table>	Capacitance Change	Within ± 25 % of initial value(6.3v,10v: ±30%)	Dissipation Factor	200% or less of initial specified value	Leakage Current	initial specified value or less																																		
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<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Dφ</td> <td>5-6.3φ</td> <td>φ8</td> <td>φ10~ 18φ</td> </tr> <tr> <td>Life</td> <td>6000hrs</td> <td>8000hrs</td> <td>10000hrs</td> </tr> </table>	Dφ	5-6.3φ	φ8	φ10~ 18φ	Life	6000hrs	8000hrs	10000hrs																																	
Dφ	5-6.3φ	φ8	φ10~ 18φ																																						
Life	6000hrs	8000hrs	10000hrs																																						
Shelf Life	After placed at 105°C without voltage applied for 1000 hours, the capacitors shall meet the same requirement as load life.																																								

Diagram of Dimensions



ψD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
ψd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
a	1.5	1.5	1.5	1.5	2.0	2.0	2.0

Multiplier for Ripple Current

Frequency coefficient		Freq. (Hz)			
Cap(µF)	120	1K	10K	100K	
8.2 to 33	0.42	0.70	0.90	1.00	
47 to 270	0.50	0.73	0.92	1.00	
330 to 680	0.55	0.77	0.94	1.00	
820 to 1800	0.60	0.80	0.96	1.00	
2200 to 8200	0.70	0.85	0.98	1.00	

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TC

Low Impedance & Long Life Series

■ Dimensions, Rated Ripple Current, Max Impedance

Capacitance (μ F)	Rated (Surge) Voltage								
	6.3V (8)			10V (13)			16V (20)		
	SIZE	Ripple	Z	SIZE	Ripple	Z	SIZE	Ripple	Z
100							5x11	345	0.242
150				5x11	345	0.242			
220	5x11	345	0.242				6.3x11	540	0.103
330				6.3x11	540	0.103			
470	6.3x11	540	0.103				8x12	945	0.062
680				8x12	945	0.062	8x16	1250	0.050
							10X12.5	1330	0.043
820	8x12	945	0.062						
1000				8x16	1250	0.050	8x20	1500	0.032
				10X12.5	1330	0.043	10X16	1760	0.031
1200	8x16	1250	0.050						
	10X12.5	1330	0.043						
1500	8x20	1500	0.032	8x20	1500	0.032	10X20	1960	0.022
				10x16	1760	0.031			
1800	10x16	1760	0.031	10x20	1960	0.022	10x25	2250	0.020
2200	10x20	1960	0.022	10x25	2250	0.020	13x20	2480	0.019
2700	10x25	2250	0.020				13x25	2900	0.017
3300				13x20	2480	0.019	13x30	3450	0.014
							16x20	3250	0.017
3900	13x20	2480	0.019	13x25	2900	0.017	13x35	3570	0.013
4700	13x25	2900	0.017	13X30	3450	0.014	16x25	3630	0.014
				16x20	3250	0.017			
5600	13X30	3450	0.014	13x35	3570	0.013			
6800	16x20	3250	0.017	16x25	3630	0.014			
	13x35	3570	0.013						
8200	16x25	3630	0.014						

☆ Size: D ϕ x L (mm) ☆ Ripple Current: (mA/rms), 105°C, 100KHz ☆ Impedance (Ω), 20°C, 100KHz

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■ Dimensions, Rated Ripple Current, Max Impedance

Capacitance (μ F)	Rated (Surge) Voltage								
	25V (32)			35V (44)			50V (63)		
	SIZE	Ripple	Z	SIZE	Ripple	Z	SIZE	Ripple	Z
27							5x11	238	0.3400
47				5x11	345	0.2200			
56							6.3x11	385	0.1400
68	5x11	345	0.242						
100				6.3x11	540	0.094	8x12	724	0.074
120							8x16	950	0.061
150	6.3x11	540	0.103				10x12.5	979	0.061
180							8x20	1190	0.046
220				8x12	945	0.056	10x16	1370	0.042
270				8x16	1250	0.045	10x20	1580	0.030
330	8x12	945	0.062	10x12.5	1330	0.039	10x25	1870	0.028
390	8x16	1250	0.050	8x20	1500	0.029			
470	10x12.5	1330	0.043	10x16	1760	0.028	13x20	2050	0.027
560	8x20	1500	0.032	10x20	1960	0.020	13x25	2410	0.023
680	10x16	1760	0.031	10x25	2250	0.018	13x30	2860	0.021
820	10x20	1960	0.022				13x35	2960	0.019
							16x20	2730	0.023
1000	10x25	2250	0.020	13x20	2480	0.017	16x25	3010	0.021
1200				13x25	2900	0.015			
1500	13x20	2480	0.019	13x30	3450	0.013			
				16x20	3250	0.015			
1800	13x25	2900	0.017	13x35	3570	0.012			
2200	13x30	3450	0.014	16x25	3630	0.013			
	16x20	3250	0.017						
2700	13x35	3570	0.013						
3300	16x25	3630	0.014						

☆ Size: D ϕ x L (mm) ☆ Ripple Current: (mA/rms), 105°C, 100KHz ☆ Impedance (Ω), 20°C, 100KHz

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■ Dimensions, Rated Ripple Current, Max Impedance

Capacitance (μF)	Rated (Surge) Voltage								
	63V (79)			80V (100)			100V (125)		
	SIZE	Ripple	Z	SIZE	Ripple	Z			
8.2							5×11	163	1.400
12				5×11	163	1.400			
18	5×11	173	1.000				6.3×11	267	0.570
33				6.3×11	267	0.570	8×12	462	0.360
47	6.3×11	278	0.560				8×16	585	0.250
56				8×12	462	0.360	10×12.5	624	0.230
68				8×16	585	0.250	8×20	735	0.190
82	8×12	525	0.264	10×12.5	624	0.230	10×16	780	0.170
100	8×16	688	0.192	8×20	735	0.190	10×20	1040	0.120
							13×16	975	0.130
120	10×12.5	725	0.180	10×16	780	0.170	10×25	1170	0.110
150	8×20	861	0.144				13×20	1430	0.085
180	10×16	998	0.132	10×20	1040	0.120			
				13×16	975	0.130			
220				10×25	1170	0.110	13×25	1620	0.060
270	10×20	1200	0.094	13×20	1430	0.085	13×30	1950	0.051
	13×16	1200	0.098				16×20	1750	0.058
330	10×25	1410	0.083	13×25	1620	0.060	13×35	2140	0.043
390	13×20	1570	0.072	13×30	1950	0.051	13×40	2340	0.036
				16×20	1750	0.058	16×25	2210	0.044
							18×20	1950	0.054
470	13×25	1990	0.052	13×35	2140	0.043	16×32	2400	0.033
							18×25	2270	0.038
560	13×30	2410	0.042	13×40	2340	0.036	16×36	2600	0.029
	16×20	2100	0.052	16×25	2210	0.044	18×32	2470	0.031
				18×20	1950	0.054			
680	13×35	2620	0.040	16×32	2400	0.033	16×40	2860	0.027
							18×36	2860	0.027
820	13×40	2940	0.032	16×36	2600	0.029	18×40	3510	0.026
	16×25	2730	0.038	18×25	2270	0.038			
	18×20	2500	0.046						
1000				16×40	2860	0.027			
				18×32	2470	0.031			
1200	16×32	2990	0.029	18×36	2860	0.027			
	18×25	2800	0.037						
1500	16×36	3040	0.025	18×40	3510	0.026			
	18×32	3300	0.030						
1800	16×40	3570	0.023						
	18×36	3570	0.024						
2200	18×40	3670	0.022						

☆ Size: D φ x L (mm) ☆ Ripple Current: (mA/rms), 105°C, 100KHz ☆ Impedance (Ω), 20°C, 100KHz