

ALUMINUM ELECTROLYTIC CAPACITOR

Suntan®

105°C, LOW IMPEDANCE, FOR SWITCHING POWER SUPPLIES

TS13D CD263

FEATURES

- Load life of 2000 hours at 105°C
- Low impedance, High ripple current
- High performance and reliability
- For switching mode power supplies (SMPS) and industry electronics



◆ Specifications

ITEMS		PERFORMANCE CHARACTERISTICS																																															
Operating Temperature Range(°C)		-40~+105							-25~+105																																								
Rated Voltage Range (V)		6.3~100							160~400																																								
Capacitance Tolerance (25°C, 120Hz)		±20%																																															
Leakage Current(μA)		0.01 CV or 3 whichever is greater. (at 25°C, after 2 minutes)							CV≤ 1000:0.1CV+40 (at 25°C, after 1 minute) CV≥ 1000:0.04CV+100 (at 25°C, after 1 minute)																																								
		C: Nominal Capacitance (μF) V: Rated Voltage (V)																																															
Dissipation Factor (25°C, 120Hz)		<table border="1"> <thead> <tr> <th>Rated Voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>315</th> <th>350</th> <th>400</th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <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>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> </tr> </tbody> </table>														Rated Voltage(V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400	Tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	0.15	0.20	0.20	0.20				
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		When nominal capacitance is over 1000 μF. Tan δ shall be added 0.02 to the listed value with increase of every 1000 μF																																															
Temperature Stability (120Hz)		<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Impedance</td> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>3</td> <td colspan="4">2</td> <td></td> </tr> <tr> <td>Ratio</td> <td>Z-55°C/Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td colspan="3">3</td> <td></td> </tr> </tbody> </table>							Rated Voltage (V)	6.3	10	16	25	35	50	63	100	Impedance	Z-25°C/Z+20°C	4	3	2					Ratio	Z-55°C/Z+20°C	8	6	4	3				<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>160~250</th> <th>315~400</th> </tr> </thead> <tbody> <tr> <td>Impedance</td> <td>Z-25°C/Z+20°C</td> <td colspan="2">3</td> </tr> <tr> <td>Ratio</td> <td>Z-55°C/Z+20°C</td> <td>8</td> <td>6</td> </tr> </tbody> </table>			Rated Voltage (V)	160~250	315~400	Impedance	Z-25°C/Z+20°C	3		Ratio	Z-55°C/Z+20°C	8	6
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Load Life (+85°C)	T _{me}	2000 hours. (ΦD 8,1000 hours)																																															
	Leakage current	Not more than the specified value.																																															
	Capacitance Change	Within±20% of initial value.																																															
	Dissipation factor	Not more than 200% of the specified value.																																															
Shelf Life(105°C)		1000hours. No voltage applied. After test: U _R to be applied for 30 minutes, 24 to 48 hours before measurement.																																															

◆ Dimensions

mm

ΦD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0		7.5	
Φd ±0.05	0.5			0.6		0.8	
a Max	D<18		D=18				
	+1.5 -1.0		L<35.5		L≥35.5		
b Max	D<18			0.5			
	D≥18			1.0			

◆ Multiplier for ripple current

Frequency coefficient

Rated Voltage(V)	Cap (μF)	Freq(Hz)				
		50	120	1K	10K	100K
6.3~100	0.1~4.7	—	0.4	0.7	0.8	1.0
	10~47	—	0.5	0.8	0.9	1.0
	100~220	—	0.7	0.9	0.9	1.0
	330~1000	—	0.8	0.8	1.0	1.0
160~400	2200~15000	—	0.9	1.0	1.0	1.0
	0.47~220	0.80	1.0	1.3	1.4	1.6

Temperature coefficient

Rated Voltage(V)	Temperature(°C)		
	+70	+85	+105
6.3~100	2.0	1.7	1.0
160~400	1.8	1.4	1.0

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WV (V) / Cap (μ F)	6.3			10			16			25		
	Size	Impedance	Ripple	Size	Impedance	Ripple	Size	Impedance	Ripple	Size	Impedance	Ripple
	\square DxL (mm)	Ω	mArms	\square DxL (mm)	Ω	mArms	\square DxL (mm)	Ω	mArms	\square DxL (mm)	Ω	mArms
4.7	--	--	--	--	--	--	--	--	--	5x11	3.0	85
10	--	--	--	--	--	--	5x11	1.9	105	5x11	2.5	92
22	--	--	--	5x11	2.5	92	5x11	1.9	105	5x11	1.9	105
33	5x11	2.5	105	5x11	1.9	105	5x11	1.5	120	5x11	1.5	120
47	5x11	1.5	120	5x11	1.5	120	5x11	1.2	130	5x11	1.2	130
100	5x11	1.2	130	5x11	1.2	130	6.3x11	0.58	220	6.3x11	0.58	220
220	6.3x11	0.87	180	6.3x11	0.58	220	8x11.5	0.47	290	8x11.5	0.39	315
330	6.3x11	0.58	220	8x11.5	0.47	265	8x11.5	0.39	315	10x12.5	0.23	500
470	8x11.5	0.39	315	8x11.5	0.39	315	10x12.5	0.23	500	10x16	0.18	615
1000	10x12.5	0.23	500	10x16	0.18	615	10x20	0.12	825	12.5x20	0.090	1050
2200	12.5x20	0.095	1000	12.5x20	0.090	1050	12.5x25	0.068	1300	16x25	0.056	1740
3300	12.5x20	0.090	1050	12.5x25	0.068	1300	16x25	0.056	1740	16x31.5	0.045	2110
4700	16x25	0.061	1670	16x25	0.056	1740	16x31.5	0.045	2110	18x35.5	0.036	2580
6800	16x25	0.056	1740	16x31.5	0.045	2110	18x35.5	0.036	2580	--	--	--
10000	16x31.5	0.045	2110	18x35.5	0.036	2580	--	--	--	--	--	--
15000	18x35.5	0.036	2580	--	--	--	--	--	--	--	--	--

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WV (V) / Cap (μ F)	35			50			63			100		
	Size	Impedance	Ripple	Size	Impedance	Ripple	Size	Impedance	Ripple	Size	Impedance	Ripple
	\square DxL (mm)	Ω	mArms	\square DxL (mm)	Ω	mArms	\square DxL (mm)	Ω	mArms	\square DxL (mm)	Ω	mArms
0.1	--	--	--	5x11	18.0	10	--	--	--	--	--	--
0.22	--	--	--	5x11	13.0	15	--	--	--	--	--	--
0.33	--	--	--	5x11	10.0	15	--	--	--	--	--	--
0.47	--	--	--	5x11	7.0	23	--	--	--	5x11	13.0	30
1	--	--	--	5x11	4.9	35	--	--	--	5x11	11.0	45
2.2	--	--	--	5x11	4.2	35	--	--	--	5x11	9.2	60
3.3	--	--	--	5x11	3.9	65	--	--	--	5x11	7.2	67
4.7	5x11	2.5	92	5x11	3.6	82	5x11	5.8	74	5x11	6.3	75
10	5x11	1.9	105	5x11	2.7	100	5x11	3.6	95	6.3x11	3.3	110
22	5x11	1.5	120	5x11	1.9	125	6.3x11	2.1	130	8x11.5	1.4	165
33	5x11	1.2	130	6.3x11	1.1	195	6.3x11	1.7	160	10x12.5	0.94	305
47	6.3x11	0.58	220	6.3x11	0.90	245	8x11.5	1.2	305	10x16	0.68	320
100	8x11.5	0.39	315	8x11.5	0.50	385	10x12.5	0.65	395	12.5x20	0.28	585
220	10x12.5	0.23	500	10x16	0.27	505	10x20	0.32	505	16x25	0.16	1120
330	10x16	0.18	615	10x20	0.18	675	12.5x20	0.22	660	16x25	0.13	1290
470	10x20	0.12	825	12.5x20	0.12	895	12.5x25	0.16	850	16x31.5	0.11	1350
1000	12.5x25	0.068	1300	16x25	0.076	1495	16x31.5	0.098	1430	--	--	--
2200	16x31.5	0.045	2110	18x35.5	0.050	2190	--	--	--	--	--	--
3300	18x35.5	0.036	2580	--	--	--	--	--	--	--	--	--

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WV (V) / Cap (μ F)	160		200		250		315		350		400	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
	□DxL (mm)	mArms	□DxL (mm)	mArms	□DxL (mm)	mArms	□DxL (mm)	mArms	□DxL (mm)	mArms	□DxL (mm)	mArms
0.47	6.3x11	12	6.3x11	12	6.3x11	12	6.3x11	11	6.3x11	11	--	--
1	6.3x11	18	6.3x11	18	6.3x11	18	6.3x11	18	6.3x11	18	8x11.5	18
2.2	6.3x11	26	6.3x11	26	8x11.5	30	8x11.5	30	8x11.5	30	10x12.5	30
3.3	8x11.5	37	8x11.5	37	10x12.5	43	10x12.5	36	10x12.5	36	10x16	40
4.7	8x11.5	44	10x12.5	50	10x12.5	50	10x16	47	10x16	47	10x20	52
10	10x12.5	75	10x16	80	10x20	90	10x20	79	12.5x20	79	12.5x20	79
22	10x20	135	10x20	135	12.5x25	155	12.5x25	130	12.5x25	130	16x25	130
33	12.5x20	175	12.5x25	190	12.5x25	190	16x25	160	16x25	160	16x31.5	175
47	12.5x25	230	12.5x25	230	16x25	225	16x31.5	210	16x31.5	210	18x35.5	220
100	16x25	330	16x31.5	360	18x35.5	340	18x40	335	18x40	335	--	--
220	18x35.5	500	18x40	525	--	--	--	--	--	--	--	--

Note: Specification are subject to change without notice. For more detail and update, please visit our website.