



ENGLISH

Datasheet

Aluminium Electrolytic Capacitor

RS Stock number 711-2037



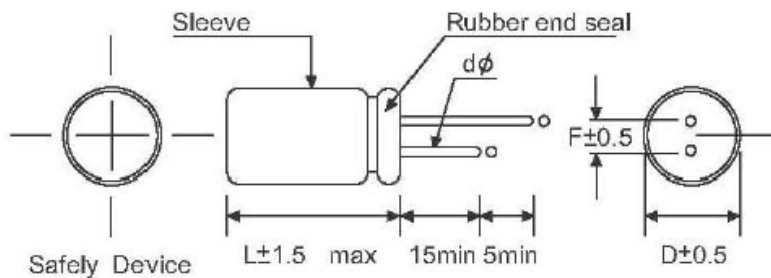
Specifications:

Item	Performance Characteristics																																												
Operating Temperature Range	-40 to +105°C	-25 to +105°C																																											
Rated Voltage Range	6.3 to 100 VDC	160 to 450 VDC																																											
Capacitance Tolerance	± 20% (120Hz, +20°C)																																												
Leakage Current (at 20°C, max.)	I < 0.01 CV or 3 (µA). After 1 minute whichever is greater measured with rated working voltage applied.	I < 0.03 CV or 3 (µA). After 1 minute with rated working voltage applied.																																											
Dissipation Factor (120Hz, 20°C)	<table border="1"> <thead> <tr> <th>Working voltage (VDC)</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>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>D.F (%) Max.</td> <td>23</td> <td>20</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>10</td> <td>10</td> <td>15</td> <td>15</td> <td>16</td> <td>20</td> <td>20</td> <td>20</td> </tr> </tbody> </table>															Working voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	D.F (%) Max.	23	20	16	14	12	10	10	10	15	15	16	20	20	20
	Working voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																														
D.F (%) Max.	23	20	16	14	12	10	10	10	15	15	16	20	20	20																															
For capacitance > 1000µ F, add 2% per another 1000µ (+20°C at 120Hz)																																													

Specifications:

Item	Performance Characteristics																																													
Low Temperature Characteristics (at 120Hz)	Impedance ratio max.																																													
	<table border="1"> <thead> <tr> <th>W.V (VDC)</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>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25°C/+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>3</td> <td>3</td> <td>5</td> <td>6</td> <td>15</td> </tr> <tr> <td>Z-40°C/+20°C</td> <td>9</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	W.V (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	Z-25°C/+20°C	4	3	2	2	2	2	2	2	3	3	3	5	6	15	Z-40°C/+20°C	9	6	4	4	3	3	3	3	-	-	-	-	-	-
	W.V (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																															
Z-25°C/+20°C	4	3	2	2	2	2	2	2	3	3	3	5	6	15																																
Z-40°C/+20°C	9	6	4	4	3	3	3	3	-	-	-	-	-	-																																
<p>For capacitance value 1000µF, add 0.5 per another 1000µF for -25°C/+20°C For capacitance value 1000µF, add 1 per another 1000µF for -40°C/+20°C</p>																																														
Load Life	<p>Test Conditions: Duration time: 2000hrs Ambient temperature: +105°C Applied voltage: Rated DC working voltage After test requirements: +20°C After test requirements: ≤ ± 20% of initial measured value Dissipation Factor: ≤ 200% of the initial specified value Leakage Current: ≤ the initial specified value</p>																																													
Shelf Life	<p>Test Conditions: Duration time: 1000hrs Ambient temperature: +105°C Applied Voltage: None After test requirements at +20°C: Same limits as load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.</p>																																													

Diagram of Dimensions:



(Unit: mm)

D	5	6	8	10	13	16	18	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	12
φd	0.5		0.6			0.8		1.0	

**Features:**

- Used in communication equipment's, switching power supply, etc.
- Safety vent construction design

Ripple Current & Temperature

Temperature (°C)	45	60	70	85	105
Multiplier	2.10	1.90	1.65	1.40	1.00

Ripple Current & Frequency Multipliers

CAP (μ F)/Hz	50 (60)	120	400	1K	10K	50 – 100K
$CAP \leq 10$	0.8	1.0	1.30	1.45	1.65	1.70
$10 < CAP \leq 100$	0.8	1.0	1.23	1.36	1.48	1.53
$100 < CAP \leq 1000$	0.8	1.0	1.16	1.25	1.35	1.38
$1000 < CAP$	0.8	1.0	1.11	1.18	1.25	1.28

Case Size

∅ D x L (mm)

WV (SV) uF	6.3		{8}		10		{13}		16		{20}		25		{32}		35		{44}	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
4.7													5x11	27	5x11	29				
6.8													5x11	35	5x11	38				
10									5x11	38			5x11	40	5x11	42				
22			5x11	50	5x11	56	5x11	65	5x11	70	5x11	78	5x11	85	5x11	92				
33	5x11	56	5x11	60	5x11	65	5x11	70	5x11	75	5x11	80	5x11	85	5x11	90	5x11	95	5x11	100
47	5x11	68	5x11	72	5x11	77	5x11	82	5x11	87	5x11	92	5x11	97	5x11	102	5x11	107	5x11	112
68	5x11	77	5x11	82	5x11	87	5x11	92	5x11	97	5x11	102	6.3x11	107	6.3x11	112	6.3x11	117	6.3x11	122
100	5x11	98	5x11	110	5x11	120	5x11	130	5x11	140	5x11	150	6.3x11	160	6.3x11	170	6.3x11	180	6.3x11	190
220	5x11 6.3x11	160 180	6.3x11	180	6.3x11	200	6.3x11	220	6.3x11	240	6.3x11	260	8x11	280	8x11	300	8x11	320	8x11	340
330	6.3x11	200	6.3x11	220	6.3x11	240	6.3x11	260	6.3x11	280	6.3x11	300	8x11	320	8x11	340	8x11	360	8x11	380
470	6.3x11 8x11	280 310	6.3x11	300	6.3x11	320	6.3x11	340	6.3x11	360	6.3x11	380	8x11	400	8x11	420	8x11	440	8x11	460
560	8x11	320	8x11	330	8x11	340	8x11	350	8x11	360	8x11	370	10x12	380	10x12	390	10x12	400	10x12	410
680	8x11	360	10x12	420	10x12	440	10x12	460	10x12	480	10x12	500	10x15	520	10x15	540	10x15	560	10x15	580
820	8x11	390	10x12	480	10x12	500	10x12	520	10x12	540	10x12	560	10x15	580	10x15	600	10x15	620	10x15	640
1000	8x11	420	10x12 10x15	530 580	10x15	570	10x15	610	10x15	650	10x15	690	10x15	730	10x15	770	10x15	810	10x15	850
1200	10x15	480	10x15	650	10x15	710	10x15	770	10x15	830	10x15	890	10x20	950	10x20	1010	10x20	1070	10x20	1130
1500	10x15	620	10x17	770	10x17	820	10x17	870	10x17	920	10x17	970	13x21	1020	13x21	1070	13x21	1120	13x21	1170
2200	10x17 10x20	780 800	10x17 10x20	870 900	13x21	960	13x21	1050	13x21	1140	13x21	1230	13x21	1320	13x21	1410	13x21	1500	13x21	1590
2700	10x20	850	13x21	920	13x21	990	13x21	1060	13x21	1130	13x21	1200	16x26	1270	16x26	1340	16x26	1410	16x26	1480
3300	10x20 13x21	970 1010	10x25 13x21	1110 1160	13x21	1240	13x21	1370	13x21	1500	13x21	1630	16x26	1760	16x26	1890	16x26	2020	16x26	2150
4700	10x25 13x21	1160 1200	13x21 13x26	1360 1380	16x26	1480	16x26	1600	16x26	1720	16x26	1840	16x31	1960	16x31	2080	16x31	2200	16x31	2320
5600	13x26	1320	16x26	1510	16x31	1720	16x31	1890	16x31	2060	16x31	2230	16x36	2400	16x36	2570	16x36	2740	16x36	2910
6800	16x26	1470	16x26	1680	16x31	1880	16x31	2080	16x31	2280	16x31	2480	18x36	2680	18x36	2880	18x36	3080	18x36	3280
8200	16x26	1520	16x31	1840	16x36	1950	16x36	2060	16x36	2170	16x36	2280	18x36	2390	18x36	2500	18x36	2610	18x36	2720
10000	16x26 16x31	1690 1740	16x36 18x36	1900 1990	18x36	2080	18x41	2260	18x41	2440	18x41	2620	22x42	2800	22x42	2980	22x42	3160	22x42	3340
15000	16x36 18x36	2080 2190	18x36	2230	22x40	2300	22x40	2370	22x40	2440	22x40	2510	22x42	2580	22x42	2650	-	-	-	-

Ripple Current(mA,rms)at105□120Hz

Case Size uF	50 {63}		63 {79}		100 {125}		160 {200}		200 {250}	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1	5x11	1.3	5x11	1.3	5x11	1.3	-	-	-	-
0.22	5x11	2.9	5x11	2.9	5x11	2.9	-	-	-	-
0.33	5x11	4.2	5x11	4.2	5x11	4.2	-	-	-	-
0.47	5x11	8	5x11	8	5x11	8	5x11	12	5x11	12
1	5x11	14	5x11	14	5x11	15	5x11	17	6.3x11	17
2.2	5x11	20	5x11	21	5x11	22	6.3x11	26	6.3x11	33
3.3	5x11	26	5x11	28	5x11	30	6.3x11	32	6.3x11	43
4.7	5x11	32	5x11	34	5x11	36	6.3x11 8x11	36 42	8x11	51
6.8	5x11	40	5x11	42	6.3x11	47	8x11	56	10x12	63
10	5x11	50	5x11	51	6.3x11	60	8x11 10x12	75 78	10x12 10x15	83 90
22	5x11	75	5x11 6.3x11	75 85	6.3x11 8x11	98 105	10x15	105	10x20	135
33	5x11 6.3x11	90 95	6.3x11 8x11	105 115	8x11 10x12	145 155	10x20	170	13x21	180
47	6.3x11	120	6.3x11 8x11	145 155	10x12 10x15	170 180	13x21	210	13x21 13x26	220 230
68	8x11	155	8x11	185	10x15	240	13x26	280	16x26	300
100	8x11	200	10x12	240	10x20	290	13x26 16x26	320 330	16x26	360
220	10x12 10x15	350 380	10x17 10x20	400 430	13x26 16x26	530 560	16x36	580	18x36	590
330	10x17 10x20	450 470	13x21	570	16x26	680	18x31	710	18x36	740
470	13x21	610	13x21 13x26 16x26	640 700 720	16x26 16x31	840 860	18x41	880	22x42	890
560	13x21	660	13x26	770	16x36	880	-	-	-	-
680	13x26	770	16x26	880	16x36	920	-	-	-	-
820	13x26	850	16x26	920	18x31	970	-	-	-	-
1000	13x26 16x26	900 1010	16x32 16x36	1190 1220	18x41	1250	-	-	-	-
1500	16x31	1300	18x31	1350	22x42	1500	-	-	-	-
2200	18x36	1550	18x36	1590	25x44	1880	-	-	-	-
2700	18x36	1610	22x42	1720	-	-	-	-	-	-
3300	18x36	1780	22x42	1900	-	-	-	-	-	-
4700	22x42	2050	25x44	2200	-	-	-	-	-	-
5600	25x42	2160	-	-	-	-	-	-	-	-
6800	25x44	2280	-	-	-	-	-	-	-	-

Ripple Current(mA,rms)at105□120Hz

Case Size		Ø D x L (mm)															
uF	WV {SV}	250		{300}		350		{400}		400		{450}		450		{500}	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47		5x11	12	6.3x11	15	6.3x11	15	6.3x11	15	6.3x11	15	6.3x11	15	6.3x11	15		
1		6.3x11	17	6.3x11	20	8x11	22	8x11	22	8x11	22	8x11	22	8x11	22		
2.2		8x11	36	10x12	39	10x12	39	10x12	39	10x12	39	10x12	39	10x12	39		
3.3		8x11	43	10x12	53	10x12 10x15	53	55	55	10x15 10x20	53	55	55	10x15 10x20	53	55	55
4.7		10x12	51	10x12 10x15	63	66	66	66	66	10x15	69	69	69	10x20	64		
6.8		10x12	70	10x15	79	79	79	79	79	10x15	85	85	85	10x20	75		
10		10x15	90	10x20	110	110	110	110	110	10x15 10x20 13x21	100 112 115	100 112 115	100 112 115	13x21 13x26	92	98	98
22		10x20	160	13x26	180	180	180	180	180	13x21 16x28	170 190	170 190	170 190	16x26 16x31	175	180	180
33		13x21 13x26	175	180	16x26	190	190	190	190	16x26	220	220	220	16x36	210		
47		13x26	240	16x31	250	250	250	250	250	16x31	300	300	300	16x36	280		
68		16x26	320	16x31	330	330	330	330	330	16x36	355	355	355	18x36	330		
100		16x31	400	18x36	420	420	420	420	420	18x36	450	450	450	-	-		
120										18x31	440	440	440				

Ripple Current(mA,rms)at105□120Hz