

# Datasheet Aluminium Electrolytic Capacitor

RS Stock number 711-0729



### **Specifications:**

ltem						Perfo	orman	ce Cha	iracteris	stics					
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		<u>+</u> 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.								ated					
Dissipation Factor (120Hz, 20°C)	Working voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	D.F (%) Max.										20				
	For capacita	For capacitance > 1000μ F, add 2% per another 1000μ (+20°C at 120Hz)													

ENGLISH

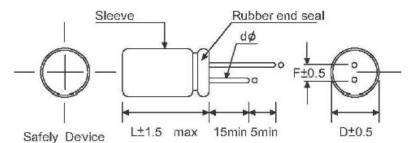
RS, Professionally Approved Products, gives you professional quality parts across all products categories. Our range has been testified by engineers as giving comparable quality to that of the leading brands without paying a premium price.



### **Specifications:**

Item	Performance Characteristics														
Low	Impedance ra	mpedance ratio max.													
Temperature Characteristics (at 120Hz)	W.V (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
(00 120112)	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										-	-			
		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													
Load Life	Test Conditio Duration time Ambient tem Applied volta After test req After test req Dissipation Fa Leakage Curr	e: 20 peratu ge: R uireme uireme actor:	re: + lated [ ents: ents: <u>&lt;</u> 200	0C wo +20°0 <u>&lt; +</u> 2 0% of t	rking \ C 0% of the ini	initial tial sp	meas ecifie								
Shelf Life	Test Conditio Duration time Ambient tem Applied Volta After test req Pre-treatmen minutes.	e: 10 peratu ge: N uireme	re: + None ents at	+20°0	: Sam					cation o	of DC w	vorking	voltage	e for 30	1

#### Diagram of Dimensions:



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

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#### **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 (µF)/Hz	50 (60)	120	400	1K	10K	50 – 100K
CAP <u>&lt;</u> 10	0.8	1.0	1.30	1.45	1.65	1.70
10< CAP <u>&lt;</u> 100	0.8	1.0	1.23	1.36	1.48	1.53
100< CAP <u>&lt;</u> 1000	0.8	1.0	1.16	1.25	1.35	1.38
1000 <cap< td=""><td>0.8</td><td>1.0</td><td>1.11</td><td>1.18</td><td>1.25</td><td>1.28</td></cap<>	0.8	1.0	1.11	1.18	1.25	1.28



Ø D x L (mm)

wv {sv}	6.3	<del>{</del> 8}	10	{13}	16	{20}	25	{32}	35	{44}
uF	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
4.7						<b>→</b>	5x11	27	5x11	29
6.8							5x11	35	5x11	38
10					5x11	38	5x11	40	5x11	42
22			5x11	50	5x11	56	5x11	60	5x11	62
33	5x11	56	5x11	60	5x11	65	5x11	70	5x11	78
47	5x11	68	5x11	72	5x11	100	5x11	105	5x11 6.3x11	110 115
68	5x11	77	5x11	82	5x11	105	6.3x11	120	6.3x11	140
100	5x11	98	5x11	110	5x11 6.3x11	115 135	6.3x11	150	6.3x11 8x11	165 180
220	5x11 6.3x11	160 180	6.3x11	180	6.3x11 8x11	220 230	8x11	240	8x11 10x12	300 330
330	6.3x11	200	6.3x11 8x11	260 280	8x11	300	8x11 10x12	350 355	10x12 10x15	410 420
470	6.3x11 8x11	280 310	6.3x11 8x11	300 315	8x11 10x12	380 400	8x14 10x12	415 445	10x17 10x20	480 520
560	8x11	320	8x11	330	10x12	410	10x15	460	10x17	540
680	8x11	360	10x12	420	10x12	480	10x15	520	10x20	650
820	8x11	390	10x12	480	10x15	550	10x15	640	10x20	760
1000	8x11	420	10x12 10x15	530 580	8x16 10x15 10x17	570 600 630	10x15 10x17 10x20	740 800 850	10x25 13x21	870 880
1200	10x15	480	10x15	650	10x20	710	10x20	850		
1500	10x15	620	10x17	770	10x20	820	13x21	910	13x26	970
2200	10x17 10x20	780 800	10x17 10x20	870 900	13x21 13x26	1020 1060	13x21 13x26 16x16	1210 1270 1270	16x26 16x31	1300 1400
2700	10x20	850	13x21	920	13x21	1100	16x26	1330	16x31	1500
3300	10x20 13x21	970 1010	10x25 13x21	1110 1160	13x21 13x26	1220 1240	16x26 16x31	1480 1540	16x36	1680
4700	10x25 13x21	1160 1200	13x21 13x26	1360 1380	16x26	1620	16x31	1800	18x36	1900
5600	13x26	1320	16x26	1510	16x31	1720	16x36	1890	18x36	2000
6800	16x26	1470	16x26	1680	16x31	1880	18x36	2040	18x41	2090
8200	16x26	1520	16x31	1840	16x36	1950	18x36	2090	22x42	2180
10000	16x26 16x31	1690 1740	16x36 18x36	1900 1980	18x36 18x41	2060 2080	22x42	2200	25x44	2300
15000	16x36 18x36	2080 2190	18x36	2230	22x40	2300	22x42	2500	-	-
							Disale Ou	rrent/m∆ r	1-1405	-40011-

Case Size

Ripple Current(mA,rms)at105
120Hz

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{SV} {63} {79} {125} {200} {250}	Case Size									Ø	) x L (mn	
0.1 $5x11$ $1.3$ $5x11$ $1.3$ $5x11$ $1.3$ $$ $$ $$ $$ $$ $0.22$ $5x11$ $2.9$ $5x11$ $2.9$ $5x11$ $4.2$ $6.3x11$	(SV)		{63} {79}		<b>'9</b> }		25}		00}	{250}		
0.22 $6x11$ $2.9$ $5x11$ $2.9$ $5x11$ $4.2$ $6.3x11$ $6.3x11$ $1.3x21$ $1.0x15$	uF	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.1	5x11	1.3	5x11	1.3	5x11	1.3	-	-	-	-	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0.22	5x11	2.9	5x11	2.9	5x11	2.9	-	-	-	-	
1 $5x11$ 14 $5x11$ 14 $5x11$ 15 $5x11$ 17 $6.3x11$ 2.2 $5x11$ 20 $5x11$ 21 $5x11$ 22 $6.3x11$ 28 $6.3x11$ 3.3 $5x11$ 28 $5x11$ 30 $6.3x11$ 32 $6.3x11$ 4.7 $5x11$ 32 $5x11$ 34 $5x11$ 38 $8.3x11$ 42 $8.3x11$ 42 $8.3x11$ 42 $8.3x11$ 42 $8.x11$ 47 $8.x11$ 42 $8.x11$ 47 $8.x11$ 45 $10x12$ 75 $10x12$ 10x12         75 $10x12$ 10x12         75 $10x12$ 10x12         120         13.x21         10x12         120         13.x21         10x12         13.x21         10.x20         13.x21         10.x20         13.x23         13.x23         13.x23         13.x23	0.33	5x11	4.2	5x11	4.2	5x11	4.2	-	-	-	-	
2.2 $5x11$ $20$ $5x11$ $21$ $5x11$ $22$ $6.3x11$ $28$ $6.3x11$ $3.3$ $5x11$ $26$ $5x11$ $28$ $5x11$ $30$ $6.3x11$ $32$ $6.3x11$ $4.7$ $5x11$ $32$ $5x11$ $34$ $5x11$ $38$ $8.3x11$ $42$ $8.x11$ $47$ $8.x11$ $56$ $10x12$ $76$ $10x15$ $10x12$ $22$ $5x11$ $75$ $6.3x11$ $76$ $8.x11$ $106$ $10x15$ $10x20$ $10x12$ $13x21$ $10x12$ $13x21$ $210$ $13x21$ $13x21$ $13x21$ $13x21$ $13x21$ $13x21$ $13x28$ $280$ $18x38$ $320$ $18x38$ $320$ $18x38$ $320$ $18x28$ $320$	0.47	5x11	8	5x11	8	5x11	8	5x11	12	5x11	12	
3.3 $5x11$ $28$ $5x11$ $30$ $6.3x11$ $32$ $6.3x11$ $4.7$ $5x11$ $32$ $5x11$ $34$ $5x11$ $36$ $6.3x11$ $32$ $8.x11$ $6.8$ $5x11$ $40$ $5x11$ $42$ $8.x11$ $36$ $8.x11$ $56$ $10x12$ $10$ $5x11$ $50$ $5x11$ $51$ $6.3x11$ $40$ $8x11$ $10x12$ $75$ $10x12$ $22$ $5x11$ $75$ $6.3x11$ $86$ $8x11$ $105$ $10x12$ $170$ $13x21$ $33$ $5x11$ $96$ $8.x11$ $115$ $8x11$ $1155$ $10x20$ $170$ $13x21$ $47$ $6.3x11$ $120$ $8.x11$ $1155$ $8x11$ $1165$ $10x12$ $210$ $13x26$ $320$ $16x28$ $470$ $8x11$ $125$ $8x11$ $13x26$ $560$ $18x36$ $560$ $18x36$ <	1	5x11	14	5x11	14	5x11	15	5x11	17	6.3x11	17	
$4.7$ $5x11$ $32$ $5x11$ $34$ $5x11$ $38$ $\frac{6.3x11}{8x11}$ $\frac{38}{42}$ $\frac{8x11}{8x1}$ $6.8$ $5x11$ $40$ $5x11$ $42$ $6.3x11$ $47$ $8x11$ $56$ $10x12$ $10$ $5x11$ $50$ $5x11$ $51$ $6.3x11$ $47$ $8x11$ $75$ $10x12$ $10$ $5x11$ $50$ $5x11$ $51$ $6.3x11$ $90$ $8x11$ $10x12$ $176$ $10x20$ $22$ $5x11$ $75$ $6.3x11$ $98$ $8x11$ $105$ $8x11$ $105$ $10x12$ $170$ $13x21$ $33$ $\frac{5x11}{6.3x11}$ $90$ $6.3x11$ $115$ $10x12$ $170$ $13x21$ $13x21$ $47$ $6.3x11$ $120$ $8x11$ $1155$ $10x12$ $170$ $13x21$ $477$ $6.3x11$ $120$ $8x11$ $185$ $10x12$ $170$ $13x21$ $477$ $6.3x11$ $120$ $8x11$ $185$ $10x12$ $170$ $13x21$ $100$ $8x11$ $120$ $8x11$ $185$ $10x12$ $170$ $13x21$ $100$ $8x11$ $200$ $10x12$ $10x12$ $13x28$ $330$ $16x28$ $100$ $8x11$ $200$ $10x20$ $290$ $13x28$ $330$ $16x28$ $100$ $8x11$ $200$ $10x20$ $430$ $18x28$ $580$ $18x38$ $880$ $10x12$ $350$ $10x12$ $170$ $13x28$ $700$ $18x28$ $840$ $18x41$	2.2	5x11	20	5x11	21	5x11	22	6.3x11	26	6.3x11	33	
4.7 $5x11$ $32$ $5x11$ $42$ $5x11$ $42$ $5x11$	3.3	5x11	26	5x11	28	5x11	30	6.3x11	32	6.3x11	43	
10 $5x11$ 50 $5x11$ 51 $6.3x11$ 60 $\frac{8x11}{10x12}$ $75$ $78$ $10x15$ 22 $5x11$ 75 $5x11$ 75 $6.3x11$ 98 $10x15$ $10x15$ $105$ $10x20$ 33 $\frac{5x11}{6.3x11}$ 96 $6.3x11$ $105$ $8x11$ $1165$ $10x12$ $170$ $13x21$ 47 $6.3x11$ 120 $6.3x11$ $1155$ $10x12$ $1155$ $10x12$ $13x21$ $210$ $13x21$ 47 $6.3x11$ 120 $6.3x11$ $145$ $10x15$ $170$ $13x21$ $210$ $13x21$ 68 $8x11$ 155 $8x11$ $145$ $10x15$ $180$ $13x28$ $280$ $16x28$ 100 $8x11$ 200 $10x12$ $240$ $10x20$ $290$ $13x28$ $330$ $16x28$ 220 $10x12$ $350$ $10x17$ $400$ $13x28$ $530$ $16x38$ $580$ $18x38$ 330 $10x17$ $400$ $13x28$ $560$ $16x38$ $580$ $18x38$ $330$ $10x17$ $400$ $13x28$ $840$ $18x31$ $710$ $18x38$ $330$ $10x17$ $400$ $13x28$ $840$ $18x31$ $710$ $18x38$ $470$ $13x21$ $610$ $13x26$ $720$ $16x38$ $840$ $18x41$ $880$ $22x42$ $560$ $13x28$ $700$ $13x28$ $700$ $18x38$ $16x28$ $18x31$ $970$ $   1000$ $13x28$ <td>4.7</td> <td>5x11</td> <td>32</td> <td>5x11</td> <td>34</td> <td>5x11</td> <td>36</td> <td>1</td> <td>1</td> <td>8x11</td> <td>51</td>	4.7	5x11	32	5x11	34	5x11	36	1	1	8x11	51	
10         5x11         50         5x11         51         6.3x11         60         10x12         78         10x15           22         5x11         75         6.3x11         75         6.3x11         98         10x15         105         10x20           33         6x11         96         6.3x11         105         8x11         145         10x20         170         13x21           47         6.3x11         120         6.3x11         145         10x15         180         13x21         210         13x21           47         6.3x11         120         6.3x11         145         10x15         180         13x24         280         16x28           68         8x11         155         8x11         185         10x15         240         13x28         280         16x28           100         8x11         200         10x12         240         10x20         290         13x28         330         16x28           220         10x15         380         10x20         430         18x28         530         18x38         18x38           330         10x17         400         13x28         560         18x38         580	6.8	5x11	40	5x11	42	6.3x11	47	8x11	56	10x12	63	
22         5x11         75         6.3x11         85         8x11         105         10x15         105         10x20           33 $6.3x11$ 90 $6.3x11$ 105         8x11         145         10x20         170         13x21           47 $6.3x11$ 120 $8x11$ 145         10x12         170         13x21         210         13x21           68         8x11         120 $8x11$ 145         10x15         240         13x28         280         16x28           100         8x11         125         8x11         185         10x15         240         13x28         320         16x28           100         8x11         200         10x12         240         10x20         290         13x28         320         16x28           220         10x15         380         10x20         430         18x28         560         16x38         580         18x38           330         10x17         460         13x26         770         16x28         840         18x41         880         22x42           560         13x28         770         16x28         880         18x3	10	5x11	50	5x11	51	6.3x11	60				83 90	
3.3         6.3x11         95         8x11         115         10x12         155         10x20         170         13x21           47         6.3x11         120         6.3x11         145         10x15         180         13x21         210         13x21           68         8x11         155         8x11         185         10x15         240         13x28         280         16x28           100         8x11         200         10x12         240         10x00         290         13x28         320         16x28           100         8x11         200         10x17         400         13x28         530         16x28         320         16x28           220         10x17         400         13x28         530         16x28         320         18x38           330         10x17         400         13x28         530         18x31         710         18x38           470         13x21         610         13x26         770         18x28         840         18x41         880         22x42           560         13x21         680         16x28         840         18x41         880         22x42           560	22	5x11	75				1	10x15	105	10x20	135	
47         6.5x11         120         8x11         155         10x15         180         13x21         210         13x28           68         8x11         155         8x11         185         10x15         240         13x28         280         18x28           100         8x11         200         10x12         240         10x20         290         13x28         320         18x28           220         10x12         350         10x17         400         13x28         560         16x38         580         18x38           330         10x17         450         13x21         570         18x28         580         18x31         710         18x38           470         13x21         610         13x28         700         18x38         840         18x41         880         22x42           560         13x21         680         18x31         700         18x38         840         18x41         880         22x42           560         13x28         770         18x28         840         18x41         880         22x42           560         13x28         770         18x28         920         -         -         - </td <td>33</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10x20</td> <td>170</td> <td>13x21</td> <td>180</td>	33							10x20	170	13x21	180	
100         8x11         200         10x12         240         10x20         290         13x28         320 330         16x28           220         10x12 10x15         380         10x17 10x20         400 430         13x28         580         16x36         580         18x36           330         10x17 10x20         450         13x21         570         16x28         580         18x31         710         18x36           470         13x21         610         13x21 13x28         570         16x28         840 880         18x31         710         18x36           470         13x21         610         13x28 18x28         770         16x38         840 880         18x41         880         22x42           560         13x21         660         13x28         770         16x38         840         18x41         880         22x42           560         13x28         770         16x38         880         -         -         -         -           680         13x28         770         16x38         920         -         -         -         -           1000         13x28         850         16x32         1190         18x31         12	47	6.3x11	120					13x21	210		220 230	
100         8x11         200         10x12         240         10x20         240         16x28         330         16x26           220         10x12         350         10x17         400         13x28         530         16x38         580         18x38           330         10x17         450         13x21         570         16x28         680         18x31         710         18x38           470         13x21         610         13x26         770         16x38         840         18x41         880         22x42           560         13x21         610         13x26         770         16x38         840         18x41         880         22x42           560         13x21         660         13x26         770         16x36         840         18x41         880         22x42           560         13x26         770         16x36         820         -         -         -         -           680         13x26         770         18x36         920         -         -         -         -           1000         13x28         850         16x28         1920         18x41         1250         -         -	68	8x11	155	8x11	185	10x15	240	13x26	280	16x26	300	
220         10x15         380         10x20         430         16x26         560         16x36         580         16x36           330         10x17 10x20         470         13x21         570         16x26         680         18x31         710         18x36           470         13x21         610         13x26 16x26         700 700         16x36         840 860         18x41         880         22x42           560         13x21         610         13x26 16x26         770         16x36         840 860         18x41         880         22x42           560         13x26         770         16x36         880         -         -         -         -           680         13x26         770         16x36         880         -         -         -         -           680         13x26         770         16x26         880         16x36         920         -         -         -         -           1000         13x26         900         16x32         1190         18x41         1250         -         -         -           1500         16x31         1300         18x31         1350         22x42         1500	100	8x11	200	10x12	240	10x20	290	1	1	16x26	360	
3.30         10x20         470         13x21         570         16x26         680         18x31         770         18x36           470         13x21         610         13x21         640         18x36         840         18x41         880         22x42           560         13x21         660         13x28         770         16x38         840         18x41         880         22x42           560         13x21         660         13x28         770         16x38         880         -         -         -           680         13x28         770         16x38         880         18x31         970         -         -         -           680         13x28         770         16x38         880         16x38         920         -         -         -           680         13x28         900         16x32         11801         970         -         -         -           1000         13x28         900         16x32         11801         18x41         1250         -         -         -           1000         16x31         1300         18x31         1350         22x42         1500         -         -	220							16x36	580	18x36	590	
470       13x21       610       13x26       700       16x31       860       18x41       880       22x42         560       13x21       660       13x26       770       16x36       880       -       -       -         680       13x26       770       16x36       880       -       -       -       -         680       13x26       770       16x26       880       16x36       920       -       -       -         680       13x26       770       16x26       880       16x36       920       -       -       -         820       13x26       850       16x26       920       18x31       970       -       -       -         1000       13x26       900       16x32       1190       18x41       1250       -       -       -         1500       16x31       1300       18x31       1350       22x42       1500       -       -       -         2200       18x38       1550       18x38       1590       25x44       1880       -       -       -         3300       18x36       1780       22x42       1900       -       -	330			13x21	570	16x26	680	18x31	710	18x36	740	
680         13x28         770         16x28         880         16x38         920         -	470	13x21	610	13x26	700			18x41	880	22x42	890	
820         13x28         850         16x28         920         18x31         970         -	560	13x21	660	13x26	770	16x36	880	-	-	-	-	
1000         13x28 16x28         900 1010         16x32 16x38         1190 1220         18x41         1250         -<	680	13x26	770	16x26	880	16x36	920	-	-	-	-	
1000         16x26         1010         16x38         1220         18x41         1250         - <td>820</td> <td>13x26</td> <td>850</td> <td>16x26</td> <td>920</td> <td>18x31</td> <td>970</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	820	13x26	850	16x26	920	18x31	970	-	-	-	-	
2200         18x38         1550         18x38         1590         25x44         1880         - <td>1000</td> <td></td> <td></td> <td></td> <td></td> <td>18x41</td> <td>1250</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	1000					18x41	1250	-	-	-	-	
2700       18x38       1610       22x42       1720       -	1500	16x31	1300	18x31	1350	22x42	1500	-	-	-	-	
3300     18x38     1780     22x42     1900     -     -     -     -       4700     22x42     2050     25x44     2200     -     -     -     -	2200	18x36	1550	18x36	1590	25x44	1880	-	-	-	-	
4700 22x42 2050 25x44 2200	2700	18x36	1610	22x42	1720	-	-	-	-	-	-	
	3300	18x36	1780	22x42	1900	-	-	-	-	-	-	
5600 25x42 2160	4700	22x42	2050	25x44	2200	-	-	-	-	-	-	
	5600	25x42	2160	-	-	-	-	-	-	-	-	
6800 25x44 2280	6800	25x44	2280	-	-	-	-	-	-	-	-	

Ripple Current(mA,rms)at105□120Hz RS, Professionally Approved Products, gives you professional quality parts across all products categories. Our range has been testified by engineers as giving comparable quality to that of the leading brands without paying a premium price.



Case Size							Ø	ð D x L (mm)	
wv {sv}	250	{300}	350	<b>{400}</b>	400	<del>{</del> 450}	450	<del>{</del> 500}	
uF	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	
0.47	5x11	12	6.3x11	15	6.3x11	15	6.3x11	15	
1	6.3x11	17	6.3x11	20	8x11	22	8x11	22	
2.2	8x11	36	10x12	39	10x12	39	10x12	39	
3.3	8x11	43	10x12	53	10x12 10x15	53 55	10x15 10x20	53 55	
4.7	10x12	51	10x12 10x15	63 66	10x15	69	10x20	64	
6.8	10x12	70	10x15	79	10x15	85	10×20	75	
10	10x15	90	10x20	110	10x15 10X20 13x21	100 112 115	13x21 13x26	92 98	
22	10×20	160	13x26	180	13x21 16x26	170 190	16x26 16x31	175 180	
33	13x21 13x26	175 180	16x26	190	16×26	220	16x36	210	
47	13x26	240	16x31	250	16x31	300	16x36	280	
68	16x26	320	16x31	330	16x36	355	18x36	330	
100	16x31	400	18×36	420	18x36	450	-	-	
120					18x31	440			

Ripple Current(mA,rms)at105
120Hz

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