

#### **Datasheet**

## ENGLISH

### **Aluminium Electrolytic Capacitor**

RS Stock number 711-1659



#### **Specifications:**

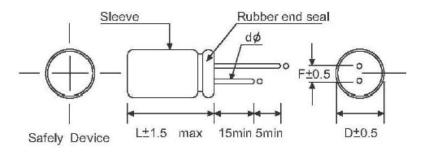
ltem						Perf	orman	ce Cha	racteri	stics						
Operating Temperature Range		-4	0 to +1	.05°C					-25 to +105°C							
Rated Voltage Range		6.3 to 100 VDC								160 to 450 VDC						
Capacitance Tolerance		<u>+</u> 20% (120Hz, +20°C)														
Leakage Current (at 20°C, max.)		$I < 0.01$ CV or 3 ( $\mu A$ ). 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 6.3 10 16 25 35 50 63 100 160 200 250 350 400 voltage (VDC)									450						
	D.F (%) Max.										20					
	For capacita	For capacitance > 1000μ F, add 2% per another 1000μ (+20°C at 120Hz)														



#### **Specifications:**

Item		Performance Characteristics													
Low	Impedance ratio max.														
Temperature Characteristics (at 120Hz)	W.V (VDC) 6.3 10 16 25 35 50 63 100 160 200 250									350	400	450			
(00 220.12)	Z- 25°C/+20°C	4	3	2	2	2	2	2	2	3	3	3	5	6	15
	Z- 40°C/+20°C											-			
	For capacitance value $1000\mu F$ , add $0.5$ per another $1000\mu F$ for $-25^{\circ}C/+20^{\circ}C$ For capacitance value $1000\mu F$ , add 1 per another $1000\mu F$ for $-40^{\circ}C/+20^{\circ}C$														
Load Life	Duration time Ambient tem Applied volta After test req After test req Dissipation Fa	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													
Shelf Life	Duration time Ambient tem Applied Volta After test req	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													

#### 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		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 (μF)/Hz	50 (60)	120	400	1K	10K	50 <b>–</b> 100K
CAP <u>&lt;</u> 10	0.8	1.0	1.30	1.45	1.65	1.70
10< CAP≤ 100	0.8	1.0	1.23	1.36	1.48	1.53
100< CAP< 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



Case Size Ø D x L (mm)

WV {SV}	6.3	{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						<b>→</b>	5x11	35	5x11	38
10				<b></b>	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	1380 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	-	-

Ripple Current(mA,rms)at105 120Hz



WV   Size   Ripple   Size   Siz	Case Size									ØE	x L (mm
0.1											
0.22	uF	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.33	0.1	5x11	1.3	5x11	1.3	5x11	1.3	-	-	-	-
0.47	0.22	5x11	2.9	5x11	2.9	5x11	2.9	-	-	-	-
1	0.33	5x11	4.2	5x11	4.2	5x11	4.2	-	-	-	-
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         42         8x11         51         6.3x11         47         8x11         56         10x12         63           10         5x11         50         5x11         51         6.3x11         60         8x11         56         10x12         63           10         5x11         50         5x11         51         6.3x11         60         10x12         78         10x15         90           22         5x11         75         6.3x11         85         8.311         105         10x15         105         10x20         135           33         5x11         75         6.3x11         165         8x11         105         10x15         105         10x20         132           47         6.3x11         160         8x11         115         8x11 <td>0.47</td> <td>5x11</td> <td>8</td> <td>5x11</td> <td>8</td> <td>5x11</td> <td>8</td> <td>5x11</td> <td>12</td> <td>5x11</td> <td>12</td>	0.47	5x11	8	5x11	8	5x11	8	5x11	12	5x11	12
3.3	1	5x11	14	5x11	14	5x11	15	5x11	17	6.3x11	17
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         10x12         75         10x12         63           22         5x11         75         6.3x11         85         8x11         105         10x15         105         10x20         135           33         5x11         90         6.3x11         85         8x11         105         10x15         10x5         10x20         135           47         6.3x11         90         6.3x11         105         8x11         1155         10x12         170         13x21         180           47         6.3x11         120         6.3x11         105         8x11         10x12         10x12         10x20         170         13x21         180           47         6.3x11         120         6.3x11         185         10x15         10x12         10x20         10x20         <	2.2	5x11	20	5x11	21	5x11	22	6.3x11	26	6.3x11	33
4.7         6x11         32         6x11         34         6x11         36         8x11         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         75         10x12         78         10x15         90           22         5x11         75         5x11         75         6.3x11         105         10x15         105         10x20         135           33         5x11         90         6.3x11         105         8x11         105         10x15         10x20         170         13x21         180           47         6.3x11         120         6.3x11         115         10x12         155         10x15         10x20         170         13x21         180           47         6.3x11         120         6.3x11         115         10x15         140         13x21         210         13x21         220         13x28         280         16x26         300           100         8x11         120	3.3	5x11	26	5x11	28	5x11	30	6.3x11	32	6.3x11	43
10	4.7	5x11	32	5x11	34	5x11	36	ı	ı	8x11	51
10	6.8	5x11	40	5x11	42	6.3x11	47	8x11	56	10x12	63
33	10	5x11	50	5x11	51	6.3x11	60				
33         6x11 6.8x11         90 85 8x11 115         106 8x11 115         10x12 155         10x20 170 13x21 180           47         6.3x11 120 8.3x11 155 1155 10x15 180         13x21 210 13x26 230         220           68         8x11 155 8x11 185 10x15 240 13x26 280 16x26 300         100 8x11 200 10x12 240 10x20 290 13x26 320 16x26 300           100         8x11 200 10x12 240 10x20 290 13x26 330 16x26 380         320 16x26 380           220 10x15 380 10x17 400 13x26 500 16x26 560 16x36 580 18x36 590         10x15 380 10x20 430 16x26 560 16x36 580 18x36 590           330 10x17 450 10x20 470 13x21 570 16x26 680 18x31 710 18x36 740           470 13x21 610 13x21 610 13x26 700 16x36 840 18x41 880 22x42 890           560 13x21 680 13x26 770 16x36 880 18x31 880	22	5x11	75					10x15	105	10x20	135
47         6.3x11         120         6.3x11         145         10x12         170         13x21         210         13x26         230           68         8x11         165         8x11         185         10x16         240         13x26         280         16x28         300           100         8x11         200         10x12         240         10x20         290         13x26         330         16x26         360           220         10x12         350         10x17         400         13x26         530         18x36         580         18x36         590           330         10x17         450         13x21         570         16x26         580         18x36         580         18x36         590           330         10x17         450         13x21         570         16x26         680         18x31         710         18x36         590           470         13x21         610         13x21         670         16x26         680         18x31         710         18x36         740           470         13x21         680         13x26         770         16x36         880         18x41         880         22x42 <td>33</td> <td></td> <td></td> <td></td> <td>105</td> <td>8x11</td> <td>145</td> <td>10x20</td> <td>170</td> <td>13x21</td> <td>180</td>	33				105	8x11	145	10x20	170	13x21	180
68         8x11         155         8x11         185         10x15         240         13x28         280         16x28         300           100         8x11         200         10x12         240         10x20         290         13x28         320         16x28         380           220         10x12         350         10x17         400         13x28         530         16x38         580         18x38         590           330         10x17         450         13x21         570         16x28         530         16x38         580         18x36         590           330         10x17         450         13x21         570         16x28         680         18x31         710         18x36         740           470         13x21         610         13x26         700         16x28         840         18x41         880         22x42         890           560         13x21         660         13x26         770         16x36         880         -         -         -         -         -           820         13x26         770         16x36         880         16x36         890         -         -         -	47			6.3x11	145	10x12	170	13x21	210		
100         8x11         200         10x12         240         10x20         290         16x26         330         16x26         360           220         10x15         380         10x20         430         16x26         580         16x36         580         18x38         590           330         10x17         450         13x21         570         16x26         680         18x31         710         18x36         740           470         13x21         610         13x26         700         16x26         840         18x41         880         22x42         890           560         13x21         660         13x26         770         16x36         880         18x41         880         22x42         890           560         13x26         770         16x36         880         -         -         -         -         -           680         13x26         770         16x36         880         -         -         -         -         -           820         13x26         850         16x26         920         18x31         970         -         -         -         -         -           1500	68	8x11	155					13x26	280		
220         10x12 10x15 380 10x20 430 16x26 560 16x36 560         18x36 580 18x36 590           330         10x17 450 10x20 470 13x21 570 16x26 680 18x31 710 18x36 740           470         13x21 610 13x26 700 16x26 720 16x31 860 18x41 880 22x42 890           560         13x21 680 13x26 720 16x26 720 16x36 880 18x41 880 22x42 890           560         13x21 680 13x26 770 16x26 880 16x36 920	100	8x11	200	10x12	240	10×20	290	ı	ı	16x26	360
330	220									18x36	590
470         13x21         610         13x26 700 16x31 860 18x41 880 22x42 890           560         13x21 680 13x26 770 16x36 880	330	10x17	450					18x31	710	18x36	740
560     13x21     680     13x26     770     16x36     880     -     -     -     -     -       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     18x36     1550     18x36     1590     25x44     1880     -     -     -     -       2700     18x36     1610     22x42     1720     -     -     -     -     -       3300     18x36     1780     22x42     1900     -     -     -     -     -       4700     22x42     2050     25x44     2200     -     -     -     -     -       5600     25x42     2160     -     -     -     -     -     -     -	470			13x26	700			18x41	880	22x42	890
820     13x28     850     18x28     920     18x31     970     -     -     -     -       1000     13x28 10x28     900 16x32 1190 16x38     1120     18x41     1250     -     -     -     -       1500     18x31     1300     18x31     1350     22x42     1500     -     -     -     -       2200     18x38     1550     18x38     1590     25x44     1880     -     -     -     -       2700     18x38     1610     22x42     1720     -     -     -     -     -       3300     18x38     1780     22x42     1900     -     -     -     -     -       4700     22x42     2050     25x44     2200     -     -     -     -     -       5600     25x42     2180     -     -     -     -     -     -     -	560	13x21	660	13x26	770	16x36	880	-	-	-	-
1000     13x28 1010     16x32 1190 16x38     1220     18x41     1250     -     -     -     -     -       1500     16x31     1300     18x31     1350     22x42     1500     -     -     -     -       2200     18x38     1550     18x38     1590     25x44     1880     -     -     -     -       2700     18x38     1610     22x42     1720     -     -     -     -     -       3300     18x38     1780     22x42     1900     -     -     -     -     -       4700     22x42     2050     25x44     2200     -     -     -     -     -       5600     25x42     2180     -     -     -     -     -     -     -	680	13x26	770	16x26	880	16x36	920	-	-	-	-
1000     18x26     1010     18x38     1220     18x41     1250     -     -     -     -     -       1500     18x31     1300     18x31     1350     22x42     1500     -     -     -     -       2200     18x38     1550     18x38     1590     25x44     1880     -     -     -     -       2700     18x38     1610     22x42     1720     -     -     -     -     -     -       3300     18x38     1780     22x42     1900     -     -     -     -     -     -       4700     22x42     2050     25x44     2200     -     -     -     -     -     -       5600     25x42     2180     -     -     -     -     -     -     -     -	820	13x26	850	16x26	920	18x31	970	-	-	-	-
1500     18x31     1300     18x31     1350     22x42     1500     -     -     -     -       2200     18x38     1550     18x38     1590     25x44     1880     -     -     -     -       2700     18x38     1610     22x42     1720     -     -     -     -     -       3300     18x38     1780     22x42     1900     -     -     -     -     -     -       4700     22x42     2050     25x44     2200     -     -     -     -     -     -       5600     25x42     2180     -     -     -     -     -     -     -     -	1000					18x41	1250	-	-	-	-
2700     18x38     1610     22x42     1720     -     -     -     -     -     -       3300     18x38     1780     22x42     1900     -     -     -     -     -     -       4700     22x42     2050     25x44     2200     -     -     -     -     -     -       5600     25x42     2180     -     -     -     -     -     -     -     -	1500					22x42	1500	-	-	-	-
3300 18x36 1780 22x42 1900	2200	18x36	1550	18x36	1590	25x44	1880	-	-	-	-
4700 22x42 2050 25x44 2200	2700	18x36	1610	22x42	1720	-	-	-	-	-	-
5600 25x42 2180	3300	18x36	1780	22x42	1900	-	-	-	-	-	-
	4700	22x42	2050	25x44	2200	-	-	-	-	-	-
6800 25x44 2280	5600	25x42	2160	-	-	-	-	-	-	-	-
	6800	25x44	2280	-	-	-	-	-	-	-	-

Ripple Current(mA,rms)at105□120Hz



Case Size Ø D x L (mm)

(	Case Size							80	DXL(mm)
	(SV)	250	{300}	350	{400}	400	Size         Ripple         Size           6.3x11         15         6.3x1           8x11         22         8x1           10x12         39         10x1           10x15         53         55         10x1           10x15         69         10x2           10x15         85         10x2           10x15         100         13x2           10x20         112         13x2           13x21         115         13x2           13x21         170         16x2           16x26         190         16x3           16x26         220         16x3           16x31         300         16x3	450	{500}
	uF	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
	0.47	7 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		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	10X20	112	13x21 13x26	92 98
	22	10x20	160	13x26	180			16x26 16x31	175 180
	33	13x21 13x26	175 180	16x26	190	16x26	220	16x36	210
	47	13x26	240	16x31	250	16x31	300	16x36	280
	68	16x26	320	16x31	330	16x36	355	18x36	330
	100	16x31	400	18x36	420	18x36	450	-	-
	120					18x31	440		

Ripple Current(mA,rms)at105 120Hz