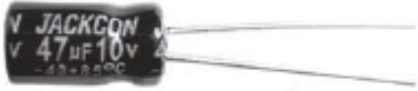


Professionally approved products.

## Datasheet

# Aluminium Electrolytic Capacitor

RS Stock number 711-1328



### Specifications:

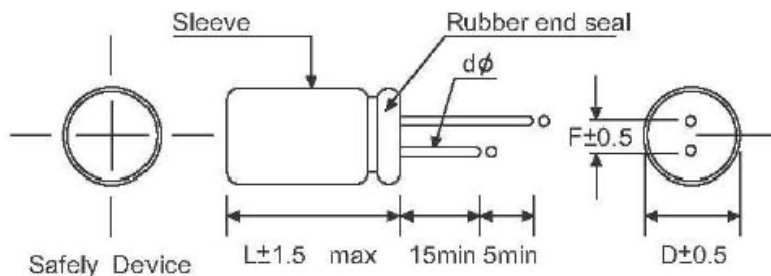
Item	Performance Characteristics																																												
Operating Temperature Range	-40 to +105°C	-25 to +105°C																																											
Rated Voltage Range	6.3 to 100 VDC	160 to 450 VDC																																											
Capacitance Tolerance	± 20% (120Hz, +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)																																													

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## 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	-	-	-	-	-	-																																
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 Conditions: Duration time: 2000hrs Ambient temperature: +105°C Applied voltage: Rated DC working voltage After test requirements: +20°C After test requirements: $\leq \pm 20\%$ of initial measured value Dissipation Factor: $\leq 200\%$ of the initial specified value Leakage Current: $\leq$ the initial specified value																																													
Shelf Life	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.																																													

## Diagram of Dimensions:



(Unit: mm)

<b>D</b>	5	6	8	10	13	16	18	22	25
<b>F</b>	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	12
<b>φd</b>	0.5		0.6			0.8		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
$CAP \leq 10$	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

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## Datasheet

Case Size

 $\varnothing$  D x L (mm)

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	60	5x11	62	5x11	66	5x11	70	5x11	74				
33	5x11	56	5x11	60	5x11	65	5x11	70	5x11	74	5x11	78	5x11	82	5x11	86				
47	5x11	68	5x11	72	5x11	100	5x11	105	5x11	110	5x11	115	5x11	120	5x11	125	5x11	130	6.3x11	110
68	5x11	77	5x11	82	5x11	105	5x11	110	5x11	115	6.3x11	120	6.3x11	125	6.3x11	130	6.3x11	135	6.3x11	140
100	5x11	98	5x11	110	5x11	115	5x11	120	5x11	125	6.3x11	130	6.3x11	135	6.3x11	140	6.3x11	145	6.3x11	150
220	5x11 6.3x11	160 180	6.3x11	180	6.3x11	220	6.3x11 8x11	230	8x11	240	8x11	250	8x11	260	8x11	270	8x11	280	8x11	290
330	6.3x11	200	6.3x11 8x11	260 280	8x11	300	8x11	310	8x11	320	8x11	330	8x11	340	8x11	350	8x11	360	8x11	370
470	6.3x11 8x11	280 310	6.3x11 8x11	300 315	8x11	380	8x11 10x12	400	8x14 10x12	415 445	8x14 10x12	430 460	8x14 10x12	445 480	10x17 10x20	460 500	10x17 10x20	480 520	10x17 10x20	500 540
560	8x11	320	8x11	330	10x12	410	10x12	420	10x15	430	10x15	440	10x15	450	10x15	460	10x15	470	10x15	480
680	8x11	360	10x12	420	10x12	480	10x12	490	10x15	500	10x15	510	10x15	520	10x15	530	10x15	540	10x15	550
820	8x11	390	10x12	480	10x15	550	10x15	560	10x15	570	10x15	580	10x15	590	10x15	600	10x15	610	10x15	620
1000	8x11	420	10x12 10x15	530 580	8x16 10x15 10x17	570 630 600	10x15 10x17 10x20	600	10x15 10x17 10x20	740 800 850	10x15 10x17 10x20	770	10x15 10x17 10x20	800	10x25 13x21	830	10x25 13x21	860	10x25 13x21	890
1200	10x15	480	10x15	650	10x20	710	10x20	720	10x20	730	10x20	740	10x20	750						
1500	10x15	620	10x17	770	10x20	820	10x20	830	13x21	840	13x21	850	13x21	860	13x26	870	13x26	880	13x26	890
2200	10x17 10x20	780 800	10x17 10x20	870 900	13x21 13x26	1020 1080	13x21 13x26 16x16	1050	13x21 13x26 16x16	1210 1270 1270	13x21 13x26 16x16	1240	13x21 13x26 16x16	1270	16x26 16x31	1300 1400	16x26 16x31	1330 1430	16x26 16x31	1360 1460
2700	10x20	850	13x21	920	13x21	1100	13x21	1110	16x26	1120	16x26	1130	16x26	1140	16x31	1150	16x31	1160	16x31	1170
3300	10x20 13x21	970 1010	10x25 13x21	1110 1160	13x21 13x26	1220 1240	13x21 13x26 16x31	1230	13x21 13x26 16x31	1480 1540	13x21 13x26 16x31	1490	13x21 13x26 16x31	1500	16x36	1510	16x36	1520	16x36	1530
4700	10x25 13x21	1160 1200	13x21 13x26	1360 1380	16x26	1620	16x26	1630	16x31	1640	16x31	1650	16x31	1660	18x36	1670	18x36	1680	18x36	1690
5600	13x26	1320	16x26	1510	16x31	1720	16x31	1730	16x36	1740	16x36	1750	16x36	1760	18x36	1770	18x36	1780	18x36	1790
6800	16x26	1470	16x26	1680	16x31	1880	16x31	1890	18x36	1900	18x36	1910	18x36	1920	18x41	1930	18x41	1940	18x41	1950
8200	16x26	1520	16x31	1840	16x36	1950	16x36	1960	18x36	1970	18x36	1980	18x36	1990	22x42	2000	22x42	2010	22x42	2020
10000	16x26 16x31	1690 1740	16x36 18x36	1900 1980	18x36 18x41	2080 2080	18x36 18x41 22x42	2090	18x36 18x41 22x42	2290 2290	18x36 18x41 22x42	2300	18x36 18x41 22x42	2310	25x44	2320	25x44	2330	25x44	2340
15000	16x36 18x36	2080 2190	18x36	2230	22x40	2300	22x40	2310	22x42	2320	22x42	2330	22x42	2340	-	2350	-	2360	-	-

Ripple Current(mA,rms)at105°C/120Hz

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 Case Size Ø D x L (mm)

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

## Professionally approved products. Datasheet

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	6.3x11	15
1		6.3x11	17	6.3x11	20	8x11	22	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	10x12	39
3.3		8x11	43	10x12	53	10x12	53	10x12	53	10x15	55	10x15	55	10x15	53	10x20	55
4.7		10x12	51	10x12	63	10x15	66	10x15	69	10x15	69	10x15	69	10x20	64	10x20	64
6.8		10x12	70	10x15	79	10x15	79	10x15	85	10x15	85	10x15	85	10x20	75	10x20	75
10		10x15	90	10x20	110	10x20	110	10x20	110	10x15	100	10x20	112	13x21	92	13x26	98
22		10x20	160	13x26	180	13x26	180	13x26	180	13x21	170	16x26	190	16x26	175	16x31	180
33		13x21	175	13x26	180	16x26	190	16x26	190	16x26	220	16x26	220	16x36	210	16x36	210
47		13x26	240	16x31	250	16x31	250	16x31	250	16x31	300	16x31	300	16x36	280	16x36	280
68		16x26	320	16x31	330	16x31	330	16x36	355	16x36	355	16x36	355	18x36	330	18x36	330
100		16x31	400	18x36	420	18x36	420	18x36	450	18x36	450	18x36	450	-	-	-	-
120								18x31	440	18x31	440	18x31	440				

Ripple Current(mA,rms)at105□120Hz