

# Bi-Polar Aluminum Electrolytic Capacitor

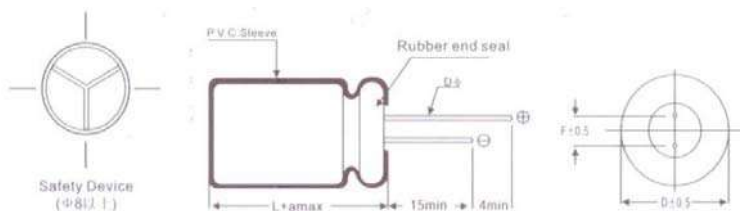
## WS series

- +105°C, Bi-polar Standard series, use in polarity reverse and change circuits
- For the special designing requirement, please contact us.

### Specifications

Item	Performance Characteristics																											
Operating Temperature Range	-40 to +105°C																											
Rated Voltage Range	6.3 to 100VDC																											
Capacitance Range	0.47 to 6800uF																											
Capacitance Tolerance	±20%(120Hz,+20°C)																											
Leakage current	$I \leq 0.03CV + 3(\text{UF})$ at 20°C, after 2 minutes																											
Dissipation Factor(tanδ) (+20°C, at 120Hz)	<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>D.F.(%)max</td> <td>0.28</td> <td>0.24</td> <td>0.22</td> <td>0.2</td> <td>0.15</td> <td>0.14</td> <td>0.1</td> <td>0.09</td> </tr> </table>	Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	D.F.(%)max	0.28	0.24	0.22	0.2	0.15	0.14	0.1	0.09									
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Low Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <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> </tr> <tr> <td>Z-40°C/+20°C</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	Z-25°C/+20°C	4	3	2	2	2	2	2	2	Z-40°C/+20°C	10	8	6	5	4	4	3	3
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	Z-25°C/+20°C	4	3	2	2	2	2	2	2																			
Z-40°C/+20°C	10	8	6	5	4	4	3	3																				
Load Life	Test conditions																											
	Duration time : 1000 Hrs																											
	Ambient temperature : +105°C																											
	Applied voltage : Rated DC working voltage																											
	After test requirements at +20°C																											
	Capacitance change : ≤±20% of the initial measured value																											
	Dissipation factor : ≤200% of the initial specified value																											
Leakage current : ≤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)



Dø	5	6.3	8	10	13	16	18
F	2	2.5	3.5	5	5	7.5	7.5
dø	0.5		0.5	0.6		0.8	

# Bi-Polar Aluminum Electrolytic Capacitor

## ■ Case Size

∅D×L (mm)

WV uF	6.3V		10V		16V		25V		35V	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47										
1										
2.2										
3.3										
4.7									5×11	34
10					5×11	47	5×11	42	5×11	43
22			5×11	57	5×11	57	6.3×11	65	6.3×11	73
33	5×11	64	5×11	64	5×11	40	6.3×11	80	8×12	100
47	5×11	76	5×11	76	6.3×11	95	6.3×11	95	8×12	120
100	6.3×11	125	6.3×11	125	8×12	160	8×12	160	10×16	230
220	8×12	215	8×12	215	10×13	275	10×16	305	13×20	410
330	8×12	265	10×16	345	10×16	375	13×20	450	13×20	505
470	10×13	370	10×16	410	10×20	485	13×20	540	13×25	655
1000	10×20	650	13×20	720	16×25	855	16×25	950	16×30	1140
2200	13×25	1160	16×25	1280	16×30	1510	18×35	1620		
3300	16×25	1570	18×30	1690	18×35	1980				
4700	16×30	2020	18×35	2160						
6800	18×35	2600								

Rated ripple current (mA, +105°C, 120KHz)