

## ZH 105°C Miniaturized, Long Life, Low impedance



### Features

- ◆ Long Life: 105°C 6000~10000hours.
- ◆ RoHS compliance.

### Specifications

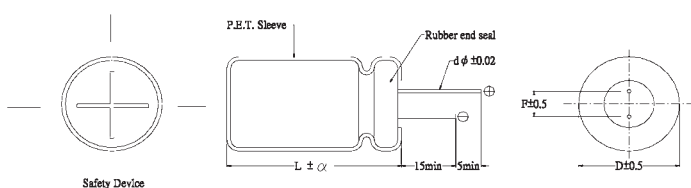
Item	Performance Characteristics																																							
Operating Temperature Range	-40 to +105°C																																							
Rated Voltage Range	6.3~100V.DC																																							
Capacitance Range	8.2~8200 µF																																							
Capacitance Tolerance	±20%(120Hz,+20°C)																																							
Leakage Current (+20°C,max.)	I ≤ 0.01CV or 3µA whichever is greater. (After 2 minutes) I= Leakage Current(µA) C= Rated Capacitance V= Rated voltage(V)																																							
Dissipation Factor (tan δ , at 20°C , 120Hz)	<table border="1"> <tr> <th>Working Voltage(VDC)</th> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td> </tr> <tr> <th>D. F.(%) max.</th> <td>22</td><td>19</td><td>16</td><td>14</td><td>12</td><td>10</td><td>9</td><td>8</td><td>8</td> </tr> </table>										Working Voltage(VDC)	6.3	10	16	25	35	50	63	80	100	D. F.(%) max.	22	19	16	14	12	10	9	8	8										
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D. F.(%) max.	22	19	16	14	12	10	9	8	8																															
For capacitance > 1000µF, add 2% per another 1000µF.																																								
Low Temperature Characteristics (at 120Hz)	Impedance ratio max																																							
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	Working Voltage(VDC)	6.3	10	16	25	35	50	63	80	100																														
Z-25°C / Z+20°C	2	2	2	2	2	2	2	2	2																															
Z-40°C / Z+20°C	3	3	3	3	3	3	3	3	3																															
For capacitance > 1000 µF, add 0.5 per another 1000 µF for -25°C/+20°C. add 1 per another 1000 µF for -40°C/+20°C.																																								
Endurance	Test conditions Duration time : as right Ambient temperature : +105°C Applied voltage : Rated DC working voltage After test requirement at +20°C Capacitance change : ≤ ±25% of the initial measured value.(6.3V,10V: ±30%) Dissipation factor : ≤200% of the initial specified value Leakage current : ≤ The initial specified value								<table border="1"> <tr> <th>DΦ</th> <th>Life hours</th> </tr> <tr> <td>Φ D ≤ 6.3</td> <td>6000</td> </tr> <tr> <td>Φ D = 8</td> <td>8000</td> </tr> <tr> <td>Φ D ≥ 10</td> <td>10000</td> </tr> </table>		DΦ	Life hours	Φ D ≤ 6.3	6000	Φ D = 8	8000	Φ D ≥ 10	10000																						
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Shelf Life	Test condition Duration time : 1000Hrs Ambient temperature : +105°C Applied voltage : None After test requirement at +20°C: Same limits as Endurance. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																																							

Radial

### Multiplier for Ripple Current vs. Frequency

CAP(µF)\Frequency(Hz)	120	1K	10K	100K ≤
8.2~33 µF	0.42	0.70	0.90	1.00
47~270 µF	0.50	0.73	0.92	1.00
330~680 µF	0.55	0.77	0.94	1.00
820~1800 µF	0.60	0.80	0.96	1.00
2200~8200 µF	0.70	0.85	0.98	1.00

### Diagram of Dimensions:(unit:mm)



φ D	5	6	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φ d	0.5		L < 20	0.6		0.8	
			L ≥ 20				
α	D < 16		D = 16		D = 18		D > 18
			L: 25~35.5	L < 25 and L ≥ 40	L: 25~31.5	L < 25 and L ≥ 35.5	
	1.5	1.5	2.0	1.5	2.0	2.0	2.0

## Case Size

WV (Vdc)	Cap (uF)	Size (mm)	Ripple current (mAmps/105°C /100KHz)	Max Imp.( Ω) at 20°C/100KHz
6.3	220	5x11	355	0.230
6.3	470	6.3x11	550	0.100
6.3	820	8x11.5	955	0.060
6.3	1200	8x16	1260	0.050
6.3	1200	10x12.5	1340	0.044
6.3	1500	8x20	1510	0.034
6.3	1800	10x16	1770	0.033
6.3	2200	10x20	1970	0.025
6.3	2700	10x25	2260	0.023
6.3	3900	13x20	2490	0.022
6.3	4700	13x25	2910	0.020
6.3	5600	13x30	3460	0.018
6.3	6800	13x35	3580	0.017
6.3	6800	16x20	3260	0.020
6.3	8200	16x25	3640	0.018
10	150	5x11	355	0.230
10	330	6.3x11	550	0.100
10	680	8x11.5	955	0.060
10	1000	8x16	1260	0.050
10	1000	10x12.5	1340	0.049
10	1500	8x20	1510	0.034
10	1500	10x16	1770	0.033
10	1800	10x20	1970	0.025
10	2200	10x25	2260	0.023
10	2700	13x20	2440	0.022
10	3300	13x20	2490	0.021
10	3900	13x25	2910	0.020
10	4700	13x30	3460	0.018
10	4700	16x20	3260	0.020
10	5600	13x35	3580	0.017
10	6800	16x25	3640	0.018
16	100	5x11	355	0.230
16	220	6.3x11	550	0.100
16	470	8x11.5	955	0.060
16	680	8x16	1260	0.050
16	680	10x12.5	1340	0.044
16	1000	8x20	1510	0.034
16	1000	10x16	1770	0.033
16	1500	10x20	1970	0.025
16	1800	10x25	2260	0.023
16	2200	13x20	2490	0.022
16	2700	13x25	2910	0.020
16	3300	13x30	3460	0.018
16	3300	16x20	3260	0.023
16	3900	13x35	3580	0.017
16	4700	16x25	3640	0.018
25	68	5x11	355	0.240
25	150	6.3x11	550	0.100
25	330	8x11.5	955	0.060
25	390	8x16	1260	0.050
25	470	10x12.5	1340	0.044
25	560	8x20	1510	0.034
25	680	10x16	1770	0.033
25	820	10x20	1970	0.025
25	1000	10x20	2045	0.024
25	1000	10x25	2260	0.023
25	1500	13x20	2490	0.022
25	1800	13x25	2910	0.020
25	2200	13x30	3460	0.018

WV (Vdc)	Cap (uF)	Size (mm)	Ripple current (mAmps/105°C /100KHz)	Max Imp.( Ω) at 20°C/100KHz
25	2200	16x20	3260	0.020
25	2700	13x35	3580	0.017
25	3300	16x25	3640	0.018
35	47	5x11	355	0.500
35	100	6.3x11	550	0.110
35	220	8x11.5	955	0.062
35	270	8x16	1260	0.060
35	330	10x12.5	1340	0.043
35	390	8x20	1510	0.032
35	470	10x16	1770	0.033
35	560	10x20	1970	0.030
35	680	10x25	2260	0.028
35	820	10x25	2360	0.027
35	1000	10x30	2580	0.025
35	1000	13x20	2490	0.022
35	1200	13x25	2910	0.018
35	1500	13x30	3460	0.018
35	1500	16x20	3260	0.023
35	1800	13x35	3580	0.017
35	2200	16x25	3640	0.018
50	27	5x11	248	0.400
50	56	6.3x11	395	0.150
50	100	8x11.5	755	0.110
50	120	8x16	960	0.065
50	150	10x12.5	989	0.067
50	180	8x20	1200	0.051
50	220	10x16	1380	0.046
50	270	10x20	1590	0.033
50	330	10x20	1600	0.033
50	330	10x25	1880	0.032
50	470	13x20	2060	0.032
50	560	13x25	2420	0.028
50	680	13x30	2870	0.026
50	820	13x35	2970	0.024
50	820	16x20	2740	0.028
50	1000	16x25	3020	0.026
63	18	5x11	183	0.980
63	47	6.3x11	288	0.600
63	82	8x11.5	535	0.300
63	100	8x16	698	0.200
63	120	10x12.5	735	0.165
63	150	8x20	871	0.140
63	180	10x16	1008	0.130
63	220	10x20	1110	0.120
63	270	10x20	1210	0.086
63	270	13x16	1210	0.090
63	270	13x20	1330	0.088
63	330	10x25	1420	0.076
63	330	13x25	1610	0.073
63	390	13x20	1580	0.066
63	470	13x25	2000	0.048
63	470	13x30	2170	0.046
63	470	16x20	2090	0.047
63	560	13x30	2420	0.040
63	560	16x20	2110	0.048
63	680	13x35	2630	0.038
63	820	13x40	2950	0.032
63	820	16x25	2740	0.037
63	820	18x20	2510	0.043

WV (Vdc)	Cap (uF)	Size (mm)	Ripple current (mAmps/105°C /100KHz)	Max Imp.( Ω) at 20°C/100KHz
63	1200	16x31.5	3000	0.029
63	1200	18x25	2810	0.036
63	1500	16x35.5	3050	0.026
63	1500	18x31.5	3310	0.030
63	1800	16x40	3580	0.024
63	1800	18x35.5	3580	0.025
63	2200	18x40	3680	0.023
80	12	5x11	173	1.540
80	33	6.3x11	277	0.630
80	56	8x11.5	472	0.400
80	68	8x16	595	0.280
80	82	10x12.5	634	0.250
80	100	8x20	745	0.210
80	120	10x16	790	0.187
80	180	10x20	1050	0.130
80	180	13x16	985	0.140
80	220	10x25	1180	0.120
80	270	13x20	1440	0.094
80	330	13x25	1630	0.066
80	390	13x30	1960	0.056
80	390	16x20	1760	0.064
80	470	13x35	2150	0.047
80	560	13x40	2350	0.045
80	560	16x25	2220	0.049
80	560	18x20	1960	0.059
80	680	16x31.5	2410	0.038
80	820	16x35.5	2610	0.032
80	820	18x25	2280	0.042
80	1000	16x40	2870	0.033

WV (Vdc)	Cap (uF)	Size (mm)	Ripple current (mAmps/105°C /100KHz)	Max Imp.( Ω) at 20°C/100KHz
80	1000	18x31.5	2480	0.036
80	1200	18x35.5	2870	0.033
80	1500	18x40	3520	0.032
100	8.2	5x11	173	1.540
100	18	6.3x11	277	0.627
100	33	8x11.5	472	0.420
100	47	8x16	595	0.400
100	56	10x12.5	634	0.350
100	68	8x20	745	0.300
100	82	10x16	790	0.220
100	100	10x20	1050	0.150
100	100	13x16	985	0.160
100	120	10x25	1180	0.140
100	150	13x20	1440	0.094
100	220	13x25	1660	0.066
100	270	13x30	1960	0.056
100	270	16x20	1760	0.064
100	330	13x35	2150	0.047
100	390	13x40	2350	0.040
100	390	16x25	2220	0.049
100	390	18x20	1960	0.059
100	470	16x31.5	2410	0.036
100	470	18x25	2280	0.042
100	560	16x35.5	2610	0.032
100	560	18x31.5	2480	0.034
100	680	16x40	2870	0.030
100	680	18x35.5	2870	0.030
100	820	18x40	3520	0.029