

ZP series 105°C 7000hours

- Extended Life time at 105°C
- High Ripple Current
- High Professional Industrial Power Supplies

■ SPECIFICATIONS

Item	Performance Characteristics																				
Operating Temperature Range	-40~105°C (160V~250V) -25~105°C (315V~450V)																				
Rated Voltage Range	160~450V																				
Capacitance Range	39~2200uF																				
Capacitance Tolerance	±20% at 120Hz,20°C																				
Leakage Current (MAX)	After 5 minutes at 20°C application of rated voltage,current is not more than 0.01CV or 1.5mA whichever is smaller. I=Leakage Current (uA) ,C=Nominal Capacitance (uF) ,V=Rated Voltage (V)																				
Dissipation Factor (tan δ)	<table border="1"> <thead> <tr> <th>Rated voltage(V)</th> <th>160</th> <th>180</th> <th>200</th> <th>250</th> <th>315</th> <th>350</th> <th>400</th> <th>450</th> <th></th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <td colspan="8">0.15</td> <td>0.20</td> </tr> </tbody> </table> <p style="text-align: right;">20°C 120Hz</p>	Rated voltage(V)	160	180	200	250	315	350	400	450		Tan δ	0.15								0.20
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Low Temperature Stability Impedance Ratio	<p style="text-align: center;">Measurement frequency:120Hz</p> <table border="1"> <thead> <tr> <th>Rated voltage(V)</th> <th>≤250</th> <th>315~450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C) / Z (+20°C)</td> <td>3</td> <td>8</td> </tr> <tr> <td>Z(-40°C) / Z (+20°C)</td> <td>12</td> <td>-</td> </tr> </tbody> </table>	Rated voltage(V)	≤250	315~450	Z(-25°C) / Z (+20°C)	3	8	Z(-40°C) / Z (+20°C)	12	-											
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Load Life	<p>After application of the rated DC coltage with rated ripple current at 105°C 7000hours the capacitors shall meet the requirement bellow</p> <table border="1"> <tbody> <tr> <td>Leakage Current</td> <td>≤The initial specified value</td> </tr> <tr> <td>Capacitance Change</td> <td>±20% of the initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>≤200% of the initial specified value</td> </tr> </tbody> </table>	Leakage Current	≤The initial specified value	Capacitance Change	±20% of the initial value	Dissipation Factor	≤200% of the initial specified value														
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Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied.</p> <table border="1"> <tbody> <tr> <td>Leakage Current</td> <td>≤The initial specified value</td> </tr> <tr> <td>Capacitance Change</td> <td>±20% of the initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>≤200% of the initial specified value</td> </tr> </tbody> </table>	Leakage Current	≤The initial specified value	Capacitance Change	±20% of the initial value	Dissipation Factor	≤200% of the initial specified value														
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■ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Frequency(Hz)	60 (50)	120	300	1k	≥10k
160~250	0.80	1.00	1.17	1.45	1.50
315~450	0.80	1.00	1.16	1.41	1.43

Temperature coefficient

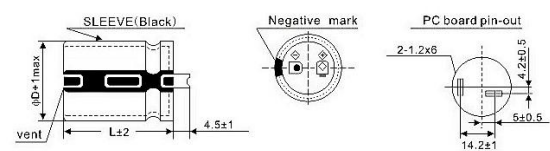
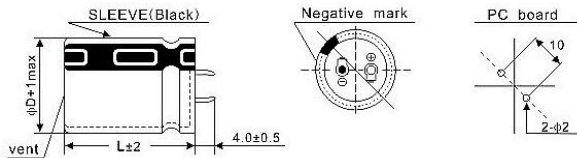
Temperature	40°C	55°C	70°C	85°C	105°C
Coefficient	2.7	2.5	2.1	1.7	1.0

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■DIMENSIONS(mm)

Terminal code:K (Φ22 ~Φ35):Standard

Terminal code:L (Φ35 ~Φ40)



■STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Size ΦD×L(mm)Ripple Current(mA 105°C,100kHz)r.m.s

W.V	CAP (uF)	SIZE	Ripple current
160	270	22×25	1.08
	330	22×30	1.17
	390	25×25	1.30
	470	22×35	1.38
		25×30	1.38
	560	22×40	1.51
		30×25	1.51
	680	22×45	1.67
		25×35	1.67
		30×30	1.67
	820	25×40	1.98
	1000	25×45	2.20
		30×35	2.20
	1200	25×50	2.28
		30×40	2.28
		35×35	2.28
	1500	30×45	2.47
		35×40	2.47
	1800	30×50	2.66
		35×45	2.66
2200	35×50	2.87	

W.V	CAP (uF)	SIZE	Ripple current
180	220	22×25	0.98
	330	22×30	1.17
		25×25	1.17
	470	22×35	1.38
		25×30	1.38
		30×25	1.38
	560	22×40	1.49
		25×35	1.49
	680	22×50	1.70
		25×40	1.70
		30×30	1.70
	820	25×45	1.98
		30×35	1.98
		35×30	1.98
	1000	30×40	2.17
		30×45	2.26
	1200	35×35	2.17
		30×50	2.48
	1500	35×40	2.48
		35×45	2.69
2200	35×50	2.87	

W.V	CAP (uF)	SIZE	Ripple current
200	220	22×25	0.98
	270	22×30	1.07
		25×25	1.07
	390	22×35	1.29
		25×30	1.29
		30×25	1.29
	470	22×40	1.37
		25×35	1.37
		30×30	1.37
	560	22×45	1.47
	680	25×40	1.68
		30×35	1.68
	820	25×50	1.97
		30×40	1.97
		35×30	1.97
	1000	30×45	2.20
		35×35	2.20
	1200	30×50	2.27
		35×40	2.27
	1500	35×50	2.48

customer products are available on request



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■STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Size $\Phi D \times L$ (mm)Ripple Current(mA 105°C,100kHz)r.m.s

W.V	CAP (uF)	SIZE	Ripple current
250	180	22×30	0.87
	220	25×25	0.98
	270	22×35	1.07
		25×30	1.07
		30×25	1.07
	330	22×40	1.18
		25×35	1.18
	390	22×45	1.29
		25×40	1.29
		30×30	1.29
	470	25×45	1.37
		30×35	1.37
		35×30	1.37
	560	25×50	1.50
	680	30×45	1.67
		35×35	1.67
	820	30×50	1.98
		35×40	1.98
1000	35×45	2.17	
1200	35×50	2.28	
315	82	22×25	0.61
	100	22×30	0.67
	120	25×25	0.73
	150	22×35	0.80
		25×30	0.80
		30×25	0.80
	180	22×40	0.87
		25×35	0.87
	220	22×45	0.97
		25×40	0.97
		30×30	0.97
	270	25×45	1.08
		30×35	1.08
		35×30	1.08
	330	25×50	1.17
		30×40	1.17
	390	30×45	1.27
		35×35	1.27
	470	30×50	1.39
		35×40	1.39
	560	35×45	1.50
	680	35×50	1.67

W.V	CAP (uF)	SIZE	Ripple current
350	82	22×25	0.62
	100	22×30	0.67
		25×25	0.67
	120	22×35	0.73
		25×30	0.73
	150	22×40	0.80
		30×25	0.80
	180	22×45	0.88
		25×35	0.88
		30×30	0.88
	220	22×50	0.97
		25×40	0.97
	270	25×50	1.07
		30×35	1.07
		30×45	1.07
	330	35×35	1.18
		35×40	1.18
	390	30×50	1.30
35×40		1.30	
560	35×50	1.49	
400	56	22×25	0.49
	68	22×30	0.54
		25×25	0.54
	82	22×35	0.61
	100	25×30	0.67
	120	22×40	0.73
		25×35	0.73
		30×25	0.73
	150	22×50	0.80
		25×40	0.80
		30×30	0.80
	180	25×45	0.87
		30×35	0.87
		35×25	0.87
	220	25×50	0.98
		30×40	0.98
		35×30	0.98
	270	30×45	1.07
35×35		1.07	
330	30×50	1.20	
	35×40	1.20	
390	35×45	1.27	
470	35×50	1.39	

W.V	CAP (uF)	SIZE	Ripple current
450	39	22×25	0.35
	47	22×30	0.37
	56	22×35	0.45
		25×25	0.45
	68	22×40	0.50
		25×30	0.50
	82	22×45	0.53
		25×35	0.53
		30×25	0.53
	100	22×50	0.61
		25×40	0.61
		30×30	0.61
	120	25×45	0.70
	150	25×50	0.77
		30×40	0.77
		35×30	0.77
	180	30×45	0.85
		35×35	0.85
220	30×50	1.00	
	35×40	1.00	
270	35×45	1.17	
330	35×50	1.37	

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