

# WS Series 85°C Standard (标准品)

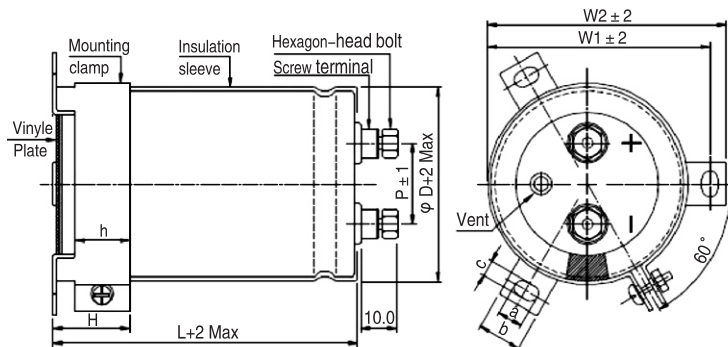
- Long Life, 2000 hours at 85°C ( $U_R, I_R$  applied), Small in sizes, high rated voltage
- Suitable for use in electronic and industrial equipments such as computer, programming control exchanger for power supplies filtering and energy storing
- RoHS Compliant



## SPECIFICATIONS AND CHARACTERISTICS IN BRIEF

Item	Performance Characteristics		
Standard	IEC 60384-4		
Temperature Range	-40°C to +85°C (Operating)    -45°C to +100°C (Storage)		
Rated Working Voltage Range $U_R$	160V to 630V		
Surge Voltage $U_s$	1.10 x $U_R$		
Nominal Capacitance Range	470 $\mu$ F to 10000 $\mu$ F		
Capacitance Tolerance	$\pm 20\%$ (120HZ, +20°C)		
Leakage Current $I_L$	= 0.025 x $C_R$ x $U_R$ ( $\mu$ A) or 6mA whichever is the smaller. Note, $C_R$ is in $\mu$ F.	Test Condition: $U_R$ , 5mins., 20°C	
Characteristics at low Temperature	Max. impedance ratio at 120 Hz	$U_R$ (V) Z -25 °C / Z 20 °C	160~500    550~630 8    14
$\tan \delta$	The values shown in the standard ratings tables, at 120HZ, 20°C		
Operational Life Time			End of Life Requirement:
+85°C, $U_R, I_R$	2000 hrs	$\Delta C/C \leq \pm 20\%$	
+85°C, $U_R$	3800 hrs	$\tan \delta \leq 2 \times$ initial $\tan \delta$ value	
		$I_L \leq$ initial specified limit	
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours, Capacitors shall meet specified value for load life characteristics listed above.		
+85°C			
Others	If the capacitors are stored more than 1 year, the Leakage Current may increase. Please apply voltage through about 1 k $\Omega$ resistor, if necessary.		

## SPECIFICATIONS



Unit:mm								
$\Phi D$	P	W1	W2	H	h	a	b	c
51	22.0	61.0	65.5	21.0	15.0	7.0	12.0	4.5
64	28.6	72.5	78.0	25.0	20.0	7.0	14.0	4.5
77	32.0	85.5	91.0	35.0	20.0	8.0	16.0	4.5
90	32.0	101	106	34.5	20.0	8.0	16.0	5.0

Screw specifications:  
Plus hexagon-headed screw: M5 x 0.8 x 10  
Max. screw tightening torque: 3.23Nm

## RIPPLE CURRENT MULTIPLIER

Freq(HZ)	50	120	1K	10K~
Coefficient	0.80	1.00	1.15	1.20

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STANDARD RATINGS									
Voltage (V)	160			200			250		
	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current
1500							35×100	0.15	3.0
1800				35×80	0.15	2.8	35×120	0.15	3.3
2200	35×80	0.15	3.4	35×100	0.15	3.6	51×80	0.15	3.7
2700	35×100	0.15	3.7	35×120	0.15	4.0	51×80	0.15	4.1
3300	35×120	0.15	4.5	51×80	0.15	4.5	51×100	0.15	5.1
4700	51×80	0.20	5.6	51×100	0.15	6.5	64×100	0.20	6.9
5600	51×100	0.20	6.9	51×120	0.15	7.6	64×120	0.20	8.1
6800	51×100	0.20	7.5	64×100	0.15	8.2	64×120	0.20	8.7
8200	51×120	0.20	8.1	64×100	0.20	9.5	76×110	0.20	10.5
10000	64×100	0.20	9.8	64×120	0.20	11.0	76×120	0.20	11.1
12000	64×120	0.20	10.8	76×100	0.20	11.5	76×140	0.20	13.0
15000	76×100	0.20	12.7	76×120	0.20	12.8	90×140	0.20	14.9
18000	76×120	0.20	14.0	76×140	0.20	15.0			
22000	76×140	0.20	16.6	90×140	0.25	15.6			
33000	90×140	0.25	18.9						

Maximum Allowable Ripple Current (A rms) at 85°C 120HZ

Case Size ΦD×L(mm)

Voltage (V)	350			400			450		
	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current
820	35×80	0.25	2.9						
1000	35×100	0.25	3.8	51×80	0.25	3.4	51×80	0.25	3.5
1200	35×120	0.25	4.2	51×80	0.25	3.8	51×100	0.25	4.5
1500	51×80	0.25	4.5	51×100	0.25	4.5	51×110	0.25	5.0
1800	51×90	0.25	4.9	51×110	0.25	5.2	51×120	0.25	5.6
2200	51×90	0.25	5.8	64×90	0.25	6.4	64×100	0.25	6.5
2700	51×100	0.25	6.3	51×130	0.25	7.1	64×110	0.25	7.8
3300	51×130	0.25	8.3	64×120	0.25	8.5	64×130	0.25	9.1
4700	64×130	0.25	10.9	76×110	0.25	10.7	76×130	0.25	11.2
5600	76×110	0.25	11.7	64×190	0.25	12.0	76×150	0.25	13.3
6800	76×130	0.25	14.0	76×150	0.25	14.6	76×170	0.25	15.0
8200	76×140	0.25	15.6	76×170	0.25	15.0	90×160	0.25	17.0
10000	76×190	0.25	17.2	90×160	0.25	18.5	90×170	0.25	18.5
12000				90×170	0.25	20.5	90×230	0.25	23.5
15000				90×230	0.25	26.5			

Maximum Allowable Ripple Current (A rms) at 85°C 120HZ

Case Size ΦD×L(mm)

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STANDARD RATINGS									
Voltage (V)	500			550			630		
	Case Size	tan $\delta$	Ripple Current	Case Size	tan $\delta$	Ripple Current	Case Size	tan $\delta$	Ripple Current
220				35×80	0.25	1.1			
270				35×100	0.25	1.3			
470	51×80	0.25	1.8	51×80	0.25	1.7			
560				51×100	0.25	2.1			
680	51×100	0.25	2.5	51×130	0.25	2.7			
820	51×100	0.25	2.8	64×100	0.25	3.5			
1000	51×110	0.25	3.2						
1200				76×100	0.25	4.2	64×130	0.30	5.9
1500	51×120	0.25	4.0	76×100	0.25	4.6	76×110	0.30	6.7
1800	64×110	0.25	4.8	76×100	0.25	5.2	76×130	0.30	8.1
2200	64×130	0.25	5.7	76×110	0.25	5.9	76×150	0.30	9.6
2700	76×110	0.25	6.5				90×130	0.30	10.7
3300				76×140	0.25	8.0	90×150	0.30	12.6
3900	76×130	0.25	8.4				90×170	0.30	14.7
							90×190	0.30	17.3

Maximum Allowable Ripple Current (A rms) at 85°C 120HZ

Case Size  $\Phi D \times L$ (mm)

Specifications are subject to change without notice. Should a safety or technical concern arise regarding the product, please be sure to contact our sales offices or agents immediately.