

**USC SERIES**
**85°C Standard, Snap-in Terminal Type**
**◆FEATURES**

- Load Life : 85°C 3000 hours.
- Smaller size with higher ripple current endurance than USR series.
- RoHS compliance.


**◆SPECIFICATIONS**

Items	Characteristics																							
Category Temperature Range	-40~+85°C	-25~+85°C																						
Rated Voltage Range	10~250V.DC	315~450V.DC																						
Capacitance Tolerance	±20% (20°C, 120Hz)																							
Leakage Current(MAX)	$I=3\sqrt{CV}$ (After 5 minutes application of rated voltage) $I$ =Leakage Current( $\mu$ A) $V$ =Rated Voltage(V) $C$ =Rated Capacitance( $\mu$ F)																							
Dissipation Factor(MAX) (tan $\delta$ )	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160~400</th> <th>420~450</th> </tr> </thead> <tbody> <tr> <td>(20°C, 120Hz)</td> <td>0.55</td> <td>0.50</td> <td>0.45</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.25</td> </tr> </tbody> </table>		Rated Voltage (V)	10	16	25	35	50	63	80	100	160~400	420~450	(20°C, 120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.25
Rated Voltage (V)	10	16	25	35	50	63	80	100	160~400	420~450														
(20°C, 120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.25														
Impedance Ratio(MAX)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>10~250</th> <th>315~400</th> <th>420~450</th> </tr> </thead> <tbody> <tr> <td><math>Z(-25^\circ\text{C})/Z(20^\circ\text{C})</math></td> <td>3</td> <td>8</td> <td>12</td> </tr> <tr> <td><math>Z(-40^\circ\text{C})/Z(20^\circ\text{C})</math></td> <td>12</td> <td></td> <td></td> </tr> </tbody> </table>		Rated Voltage (V)	10~250	315~400	420~450	$Z(-25^\circ\text{C})/Z(20^\circ\text{C})$	3	8	12	$Z(-40^\circ\text{C})/Z(20^\circ\text{C})$	12												
Rated Voltage (V)	10~250	315~400	420~450																					
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$Z(-40^\circ\text{C})/Z(20^\circ\text{C})$	12																							
Endurance	After applying rated voltage with rated ripple current for 3000hrs at 85°C, the capacitors shall meet the following requirements. <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </tbody> </table>		Capacitance Change	Within ±20% of the initial value.	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.																
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**◆MULTIPLIER FOR RIPPLE CURRENT**

Frequency coefficient

Frequency (Hz)		60 (50)	120	500	1k	10k ≤
Coefficient	10~100WV	0.90	1.00	1.05	1.10	1.15
	160~250WV	0.80	1.00	1.20	1.30	1.50
	315~450WV	0.80	1.00	1.20	1.25	1.40

**◆PART NUMBER**

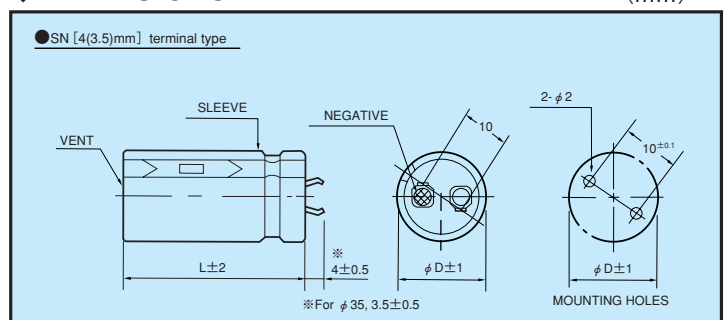
□□□	USC	□□□□□	□	OOE	SN	DXL
Rated Voltage	Series	Rated Capacitance	Capacitance Tolerance	Option	Terminal Code	Case Size

**◆Option**

	Code
without plate	OOE
with plate	Blank

**◆DIMENSIONS**

(mm)



**◆ STANDARD SIZE, RATED RIPPLE CURRENT**

Cap ( $\mu$ F)	WV $\phi$ D	10					16				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
8200							20×25; 2.56				
10000		20×25; 2.22					20×30; 2.85	22×25; 2.85			
12000		20×30; 2.44	22×25; 2.41				20×35; 3.20	22×30; 3.20			
15000		20×35; 2.90	22×30; 2.88	25×25; 2.88			20×40; 3.70	22×35; 3.70	25×25; 3.70		
18000		20×40; 3.31	22×35; 3.22	25×30; 3.08				22×40; 3.98	25×30; 3.98		
22000			22×40; 3.79	25×30; 3.66	30×25; 3.58			22×45; 4.52	25×35; 4.52	30×25; 4.52	
27000			22×45; 4.04	25×35; 4.04	30×30; 3.99			22×50; 4.98	25×40; 4.98	30×30; 4.98	
33000			22×50; 4.58	25×40; 4.56	30×30; 4.58				25×45; 5.49	30×35; 5.49	35×30; 5.49
39000				25×45; 5.29	30×35; 5.21	35×30; 5.05			25×50; 6.11	30×40; 6.11	35×35; 6.11
47000				25×50; 5.78	30×40; 5.78	35×35; 5.55				30×45; 6.80	35×35; 6.80
56000					30×45; 6.59	35×35; 6.40				30×50; 7.62	35×40; 7.62
68000					30×50; 7.50	35×40; 7.48					35×45; 8.45
82000						35×50; 8.50					35×50; 9.14

Cap ( $\mu$ F)	WV $\phi$ D	25					35				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
3300							20×25; 2.14				
3900							20×30; 2.28				
4700							20×35; 2.46	22×25; 2.46			
5600		20×25; 2.33					20×40; 2.79	22×30; 2.79	25×25; 2.79		
6800		20×30; 2.56	22×25; 2.56					22×35; 2.89	25×30; 2.89		
8200		20×35; 2.91	22×30; 2.91					22×40; 3.47	25×30; 3.47	30×25; 3.47	
10000		20×40; 3.18	22×35; 3.18	25×25; 3.18				22×45; 3.59	25×35; 3.59	30×30; 3.59	
12000			22×40; 3.53	25×30; 3.53				22×50; 4.51	25×40; 4.51	30×30; 4.51	
15000			22×45; 4.08	25×35; 4.08	30×25; 4.08				25×45; 4.80	30×35; 4.80	35×30; 4.80
18000			22×50; 4.68	25×40; 4.68	30×30; 4.68					30×40; 5.70	35×35; 5.70
22000				25×45; 5.19	30×35; 5.19	35×30; 5.19				30×45; 6.38	35×40; 6.38
27000				25×50; 6.02	30×40; 6.02	35×35; 6.02					35×45; 6.90
33000					30×45; 6.75	35×40; 6.75					35×50; 7.49
39000					30×50; 7.56	35×45; 7.56					
47000						35×50; 8.30					

Cap ( $\mu$ F)	WV $\phi$ D	50					63				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
1500							20×25; 1.69				
1800							20×30; 2.04	22×25; 2.04			
2200		20×25; 2.07					20×35; 2.40	22×30; 2.40			
2700		20×30; 2.21	22×25; 2.21				20×40; 2.52	22×35; 2.52	25×25; 2.52		
3300		20×35; 2.41	22×30; 2.41					22×40; 2.69	25×30; 2.69		
3900		20×40; 2.72	22×30; 2.72	25×25; 2.72				22×45; 3.10	25×35; 3.10	30×25; 3.10	
4700			22×35; 3.01	25×30; 3.01				22×50; 3.49	25×40; 3.49	30×30; 3.49	
5600			22×40; 3.43	25×35; 3.43	30×25; 3.43				25×45; 3.81	30×35; 3.81	
6800			22×45; 3.94	25×35; 3.94	30×30; 3.94				25×50; 4.41	30×40; 4.41	35×30; 4.41
8200				25×40; 4.37	30×35; 4.37					30×45; 4.90	35×35; 4.90
10000				25×50; 5.02	30×40; 5.02	35×30; 5.02				30×50; 5.49	35×40; 5.49
12000					30×45; 5.60	35×35; 5.60					35×45; 6.30
15000					30×50; 6.44	35×40; 6.44					
18000						35×45; 6.71					

Cap ( $\mu$ F)	WV $\phi$ D	80					100				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
680							20×25; 1.66				
820							20×30; 1.86	22×25; 1.86			
1000		20×25; 1.56					20×30; 2.02	22×30; 2.02			
1200		20×30; 1.80	22×25; 1.80				20×35; 2.12	22×30; 2.12	25×25; 2.12		
1500		20×30; 2.10	22×30; 2.10				20×40; 2.45	22×35; 2.45	25×30; 2.45		
1800		20×35; 2.30	22×30; 2.30	25×25; 2.30				22×40; 2.77	25×30; 2.77	30×25; 2.77	
2200		20×40; 2.53	22×35; 2.53	25×30; 2.53				22×45; 3.12	25×35; 3.12	30×30; 3.12	
2700			22×40; 2.93	25×35; 2.93	30×25; 2.93				25×40; 3.61	30×30; 3.61	
3300			22×45; 3.25	25×35; 3.25	30×30; 3.25				25×50; 4.06	30×35; 4.06	35×30; 4.06
3900				25×40; 3.62	30×35; 3.62					30×40; 4.60	35×35; 4.60
4700				25×45; 4.28	30×40; 4.28	35×30; 4.28				30×45; 5.13	35×40; 5.13
5600					30×45; 4.55	35×35; 4.55					35×45; 5.75
6800					30×45; 5.83	35×40; 5.83					35×50; 6.01
8200						35×45; 6.40					
10000						35×50; 7.03					

↑ Ripple Current (A r.m.s./120Hz, 85°C)  
 ↑ Case Size  $\phi$  D×L(mm)



◆ STANDARD SIZE, RATED RIPPLE CURRENT

Cap ( $\mu$ F)	wv $\phi$ D	160					180				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
270		20×25; 1.28					20×25; 1.29				
330		20×25; 1.55					20×30; 1.77	22×25; 1.49			
390		20×30; 1.63	22×25; 1.63				20×30; 1.84	22×25; 1.84			
470		20×30; 1.90	22×30; 1.86	25×25; 1.86			20×35; 1.91	22×30; 1.91	25×25; 2.08		
560		20×35; 2.14	22×30; 2.15	25×25; 2.15			20×40; 2.15	22×35; 2.25	25×25; 2.25		
680		20×40; 2.35	22×35; 2.35	25×30; 2.33	30×25; 2.33			22×35; 2.48	25×30; 2.50	30×25; 2.46	
820			22×40; 2.68	25×30; 2.65	30×25; 2.64			22×40; 2.86	25×35; 2.75	30×25; 2.69	
1000			22×45; 3.02	25×35; 3.00	30×30; 2.96			22×50; 3.10	25×40; 3.06	30×30; 3.10	
1200				25×40; 3.43	30×30; 3.41	35×30; 3.40			25×45; 3.63	30×35; 3.55	35×30; 3.49
1500				25×50; 3.96	30×35; 3.96	35×30; 3.94				30×40; 4.10	35×35; 4.02
1800					30×40; 4.31	35×35; 4.28				30×45; 4.55	35×35; 4.54
2200					30×50; 4.96	35×40; 4.96					35×40; 4.83
2700						35×45; 5.57					35×50; 5.30

Cap ( $\mu$ F)	wv $\phi$ D	200					220				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
220		20×25; 1.19					20×25; 1.23				
270		20×25; 1.39	22×25; 1.37				20×30; 1.46	22×25; 1.42			
330		20×30; 1.56	22×25; 1.51				20×35; 1.64	22×30; 1.59			
390		20×35; 1.74	22×30; 1.73	25×25; 1.71			20×35; 1.79	22×30; 1.80	25×25; 1.75		
470		20×35; 2.03	22×30; 1.97	25×25; 1.95			20×40; 2.12	22×35; 2.06	25×30; 2.08		
560		20×40; 2.18	22×35; 2.18	25×30; 2.15	30×25; 2.15			22×40; 2.22	25×35; 2.38	30×25; 2.18	
680			22×40; 2.48	25×30; 2.48	30×25; 2.48			22×45; 2.62	25×35; 2.56	30×30; 2.52	
820			22×45; 2.81	25×35; 2.79	30×30; 2.75			25×45; 2.91	30×35; 2.84	35×30; 2.79	
1000			22×50; 3.28	25×40; 3.28	30×35; 3.15				30×35; 3.36	35×30; 3.29	
1200				25×45; 3.61	30×35; 3.61	35×30; 3.57				30×40; 3.72	35×35; 3.68
1500					30×45; 4.13	35×35; 4.06				30×50; 4.18	35×40; 4.10
1800					30×50; 4.60	35×40; 4.59					35×45; 4.52
2200						35×45; 5.25					

Cap ( $\mu$ F)	wv $\phi$ D	250					315				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
150							20×30; 1.00				
180		20×25; 1.20					20×35; 1.13	22×30; 1.29	25×25; 1.38		
220		20×25; 1.26	22×25; 1.24				20×35; 1.29	22×30; 1.41	25×25; 1.47		
270		20×30; 1.42	22×25; 1.50					22×35; 1.68	25×30; 1.70		
330		20×35; 1.68	22×30; 1.66	25×25; 1.61				22×40; 1.91	25×35; 1.94	30×25; 1.98	
390		20×40; 1.92	22×35; 1.88	25×30; 1.88				22×45; 2.07	25×40; 2.11	30×30; 2.15	
470			22×35; 2.15	25×35; 2.15	30×25; 2.04				25×50; 2.31	30×35; 2.38	35×30; 2.36
560			22×40; 2.48	25×35; 2.35	30×25; 2.35					30×35; 2.63	35×30; 2.69
680				25×40; 2.67	30×30; 2.71					30×45; 2.80	35×35; 3.05
820				25×45; 3.01	30×35; 2.98	35×30; 2.96				30×50; 3.28	35×40; 3.45
1000					30×40; 3.56	35×35; 3.48					35×45; 3.57
1200					30×45; 3.99	35×35; 3.84					
1500						35×40; 4.33					
1800						35×50; 4.54					

Cap ( $\mu$ F)	wv $\phi$ D	350					385				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
68							20×25; 0.68				
82							20×30; 0.74	22×25; 0.76			
100							20×30; 0.86	22×30; 0.89			
120		20×30; 0.96	22×25; 1.04				20×35; 0.96	22×30; 0.98	25×25; 1.02		
150		20×30; 1.10	22×30; 1.20	25×25; 1.22			20×35; 1.10	22×35; 1.12	25×30; 1.14		
180		20×35; 1.24	22×30; 1.34	25×25; 1.37			20×40; 1.27	22×35; 1.27	25×30; 1.30	30×25; 1.37	
220			22×35; 1.47	25×30; 1.53	30×25; 1.54			22×40; 1.42	25×35; 1.48	30×30; 1.49	
270			22×40; 1.70	25×35; 1.73	30×25; 1.80			22×50; 1.60	25×40; 1.61	30×30; 1.64	
330			22×45; 1.87	25×35; 1.97	30×30; 2.03				25×45; 1.80	30×35; 1.85	35×30; 1.87
390				25×40; 2.14	30×35; 2.23	35×30; 2.30			25×50; 2.04	30×40; 2.05	35×35; 2.07
470				25×50; 2.55	30×35; 2.53	35×30; 2.55				30×45; 2.26	35×35; 2.26
560					30×40; 2.73	35×35; 2.75				30×50; 2.57	35×40; 2.59
680					30×50; 3.15	35×40; 3.15					35×45; 2.80
820						35×45; 3.47					
1000						35×50; 3.60					

↑ Ripple Current (A r.m.s./120Hz, 85°C)  
 ↑ Case Size  $\phi$  D×L(mm)

**◆ STANDARD SIZE, RATED RIPPLE CURRENT**

Cap ( $\mu F$ )	WV $\phi D$	400					420				
		$\phi 20$	$\phi 22$	$\phi 25$	$\phi 30$	$\phi 35$	$\phi 20$	$\phi 22$	$\phi 25$	$\phi 30$	$\phi 35$
68	20×25; 0.75						20×25; 0.70				
82	20×30; 0.82	22×25; 0.84					20×30; 0.80	22×25; 0.85			
100	20×30; 0.95	22×30; 0.99					20×35; 0.90	22×30; 0.97	25×25; 0.98		
120	20×35; 1.07	22×30; 1.09	25×25; 1.13				20×35; 1.04	22×30; 1.07	25×25; 1.08		
150	20×40; 1.22	22×35; 1.24	25×30; 1.27				20×40; 1.17	22×35; 1.21	25×30; 1.26	30×25; 1.30	
180		22×40; 1.41	25×30; 1.44	30×25; 1.52				22×40; 1.33	25×35; 1.42	30×25; 1.48	
220		22×45; 1.58	25×35; 1.64	30×30; 1.66				22×45; 1.55	25×35; 1.58	30×30; 1.65	
270			25×40; 1.79	30×30; 1.82				25×40; 1.74	30×35; 1.90	35×30; 1.94	
330			25×45; 2.00	30×35; 2.05	35×30; 2.05			25×50; 2.20	30×35; 1.98	35×35; 2.17	
390				30×40; 2.26	35×35; 2.28					30×40; 2.22	35×35; 2.27
470				30×45; 2.51	35×40; 2.54					30×45; 2.50	35×40; 2.61
560				30×50; 2.85	35×40; 2.85						35×45; 2.95
680					35×50; 3.10						

Cap ( $\mu F$ )	WV $\phi D$	450				
		$\phi 20$	$\phi 22$	$\phi 25$	$\phi 30$	$\phi 35$
56	20×25; 0.61					
68	20×30; 0.70	22×25; 0.71				
82	20×35; 0.80	22×25; 0.86				
100	20×35; 0.88	22×30; 0.95	25×25; 0.97			
120	20×40; 0.99	22×35; 1.07	25×30; 1.09	30×25; 1.12		
150		22×40; 1.18	25×30; 1.25	30×25; 1.29		
180		22×45; 1.32	25×35; 1.40	30×30; 1.45		
220			25×40; 1.59	30×30; 1.64	35×30; 1.66	
270			25×45; 1.73	30×35; 1.89	35×30; 1.90	
330			25×50; 2.12	30×40; 2.12	35×35; 2.15	
390				30×45; 2.35	35×40; 2.38	
470				30×50; 2.65	35×45; 2.68	
560					35×50; 2.88	

↑ Ripple Current (A r.m.s./120Hz, 85°C)  
 Case Size  $\phi D \times L$ (mm)

