



**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(µA)      V=Rated Voltage(V)      C=Rated Capacitance(µF)																							
Dissipation Factor(MAX) (tanδ)	<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>tanδ</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> (20°C, 120Hz)		Rated Voltage(V)	10	16	25	35	50	63	80	100	160~400	420~450	tanδ	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														
tanδ	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>Z(-25°C)/Z(20°C)</td> <td>3</td> <td>8</td> <td>12</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>12</td> <td>—</td> <td>—</td> </tr> </tbody> </table> (120Hz)		Rated Voltage(V)	10~250	315~400	420~450	Z(-25°C)/Z(20°C)	3	8	12	Z(-40°C)/Z(20°C)	12	—	—										
Rated Voltage(V)	10~250	315~400	420~450																					
Z(-25°C)/Z(20°C)	3	8	12																					
Z(-40°C)/Z(20°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**

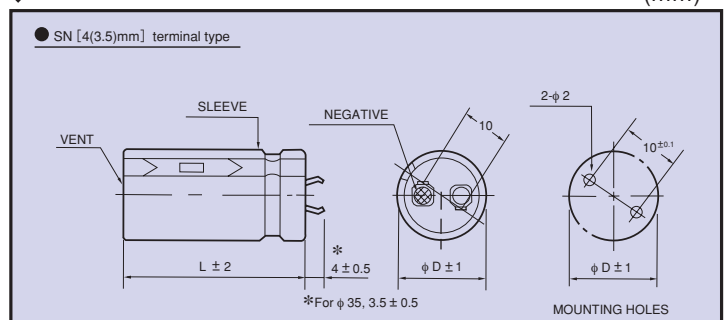
USC       SN    D×L  
 Rated Voltage      Series      Rated Capacitance      Capacitance Tolerance      Option      Terminal Code      Case Size

**◆ Option**

	Code
PET Sleeve without plate	EFC
PVC Sleeve without plate	OOE
PVC Sleeve with plate	Blank

**◆ DIMENSIONS**

(mm)



**◆ STANDARD SIZE**

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							20x25	2.56				
10000		20x25	2.22				20x30	2.85	22x25	2.85		
12000		20x30	2.44	22x25	2.41		20x35	3.20	22x30	3.20		
15000		20x35	2.90	22x30	2.88	25x25	2.88					
18000		20x40	3.31	22x35	3.22	25x30	3.08					
22000				22x40	3.79	25x30	3.66	30x25	3.58			
27000				22x45	4.04	25x35	4.04	30x30	3.99			
33000				22x50	4.58	25x40	4.56	30x30	4.58			
39000						25x45	5.29	30x35	5.21	35x30	5.05	
47000						25x50	5.78	30x40	5.78	35x35	5.55	
56000								30x45	6.59	35x35	6.40	
68000								30x50	7.50	35x40	7.48	
82000										35x50	8.50	

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							20x25	2.14				
3900							20x30	2.28				
4700							20x35	2.46	22x25	2.46		
5600		20x25	2.33				20x40	2.79	22x30	2.79	25x25	2.79
6800		20x30	2.56	22x25	2.56				22x35	2.89	25x30	2.89
8200		20x35	2.91	22x30	2.91				22x40	3.47	25x30	3.47
10000		20x40	3.18	22x35	3.18	25x25	3.18		22x45	3.59	25x35	3.59
12000				22x40	3.53	25x30	3.53		22x50	4.51	25x40	4.51
15000				22x45	4.08	25x35	4.08	30x25	4.08		25x45	4.80
18000				22x50	4.68	25x40	4.68	30x30	4.68		30x35	4.80
22000						25x45	5.19	30x35	5.19	35x30	5.19	
27000						25x50	6.02	30x40	6.02	35x35	6.02	
33000								30x45	6.75	35x40	6.75	
39000								30x50	7.56	35x45	7.56	
47000										35x50	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							20x25	1.69				
1800							20x30	2.04	22x25	2.04		
2200		20x25	2.07				20x35	2.40	22x30	2.40		
2700		20x30	2.21	22x25	2.21		20x40	2.52	22x35	2.52	25x25	2.52
3300		20x35	2.41	22x30	2.41				22x40	2.69	25x30	2.69
3900		20x40	2.72	22x30	2.72	25x25	2.72		22x45	3.10	25x35	3.10
4700				22x35	3.01	25x30	3.01		22x50	3.49	25x40	3.49
5600				22x40	3.43	25x35	3.43	30x25	3.43		25x45	3.81
6800				22x45	3.94	25x35	3.94	30x30	3.94		25x50	4.41
8200						25x40	4.37	30x35	4.37		30x45	4.90
10000						25x50	5.02	30x40	5.02	35x30	5.02	
12000								30x45	5.60	35x35	5.60	
15000								30x50	6.44	35x40	6.44	
18000										35x45	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							20x25	1.66				
820							20x30	1.86	22x25	1.86		
1000		20x25	1.56				20x30	2.02	22x30	2.02		
1200		20x30	1.80	22x25	1.80		20x35	2.12	22x30	2.12	25x25	2.12
1500		20x30	2.10	22x30	2.10		20x40	2.45	22x35	2.45	25x30	2.45
1800		20x35	2.30	22x30	2.30	25x25	2.30		22x40	2.77	25x30	2.77
2200		20x40	2.53	22x35	2.53	25x30	2.53		22x45	3.12	25x35	3.12
2700				22x40	2.93	25x35	2.93	30x25	2.93		25x40	3.61
3300				22x45	3.25	25x35	3.25	30x30	3.25		25x50	4.06
3900						25x40	3.62	30x35	3.62		30x40	4.60
4700						25x45	4.28	30x40	4.28	35x30	4.28	
5600								30x45	4.55	35x35	4.55	
6800								30x45	5.83	35x40	5.83	
8200										35x45	6.40	
10000										35x50	7.03	

↑ Ripple Current (A r.m.s./120Hz, 105°C)  
 ↑ Case Size  $\phi$  D x L (mm)



◆ STANDARD SIZE

Cap (μF) \ WV / φ D	160					180				
	φ 20	φ 22	φ 25	φ 30	φ 35	φ 20	φ 22	φ 25	φ 30	φ 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 (μF) \ WV / φ D	200					220				
	φ 20	φ 22	φ 25	φ 30	φ 35	φ 20	φ 22	φ 25	φ 30	φ 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 (μF) \ WV / φ D	250					315				
	φ 20	φ 22	φ 25	φ 30	φ 35	φ 20	φ 22	φ 25	φ 30	φ 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 (μF) \ WV / φ D	350					385				
	φ 20	φ 22	φ 25	φ 30	φ 35	φ 20	φ 22	φ 25	φ 30	φ 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 φ D×L(mm)



◆ STANDARD SIZE

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	20x25; 0.75						20x25; 0.70						
82	20x30; 0.82	22x25; 0.84					20x30; 0.80	22x25; 0.85					
100	20x30; 0.95	22x30; 0.99					20x35; 0.90	22x30; 0.97	25x25; 0.98				
120	20x35; 1.07	22x30; 1.09	25x25; 1.13				20x35; 1.04	22x30; 1.07	25x25; 1.08				
150	20x40; 1.22	22x35; 1.24	25x30; 1.27				20x40; 1.17	22x35; 1.21	25x30; 1.26	30x25; 1.30			
180		22x40; 1.41	25x30; 1.44	30x25; 1.52				22x40; 1.33	25x35; 1.42	30x25; 1.48			
220		22x45; 1.58	25x35; 1.64	30x30; 1.66				22x45; 1.55	25x35; 1.58	30x30; 1.65			
270			25x40; 1.79	30x30; 1.82					25x40; 1.74	30x35; 1.90	35x30; 1.94		
330			25x45; 2.00	30x35; 2.05	35x30; 2.05				25x50; 2.20	30x35; 1.98	35x35; 2.17		
390				30x40; 2.26	35x35; 2.28					30x40; 2.22	35x35; 2.27		
470				30x45; 2.51	35x40; 2.54					30x45; 2.50	35x40; 2.61		
560				30x50; 2.85	35x40; 2.85						35x45; 2.95		
680					35x50; 3.10								

Cap ( $\mu$ F)	WV $\phi$ D	450				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
56	20x25; 0.61					
68	20x30; 0.70	22x25; 0.71				
82	20x35; 0.80	22x25; 0.86				
100	20x35; 0.88	22x30; 0.95	25x25; 0.97			
120	20x40; 0.99	22x35; 1.07	25x30; 1.09	30x25; 1.12		
150		22x40; 1.18	25x30; 1.25	30x25; 1.29		
180		22x45; 1.32	25x35; 1.40	30x30; 1.45		
220			25x40; 1.59	30x30; 1.64	35x30; 1.66	
270			25x45; 1.73	30x35; 1.89	35x30; 1.90	
330			25x50; 2.12	30x40; 2.12	35x35; 2.15	
390				30x45; 2.35	35x40; 2.38	
470				30x50; 2.65	35x45; 2.68	
560					35x50; 2.88	

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