



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

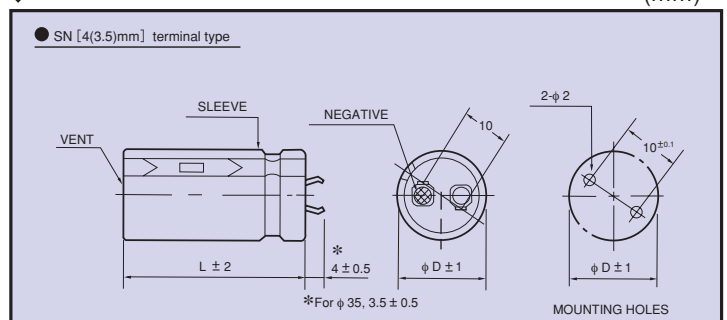
USC SN D×L
 Rated Voltage Series Rated Capacitance Capacitance Tolerance Option Terminal Code Case Size

◆ Option

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

◆ DIMENSIONS

(mm)



◆ STANDARD SIZE

Cap (μ F)	WV ϕ D	10					16					
		ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 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 (μ F)	WV ϕ D	25					35					
		ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 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 (μ F)	WV ϕ D	50					63					
		ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 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 (μ F)	WV ϕ D	80					100					
		ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 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 ϕ D x L (mm)



◆ STANDARD SIZE

Cap (μ F)	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		20x25:1.28					20x25:1.29					
330		20x25:1.55					20x30:1.77	22x25:1.49				
390		20x30:1.63	22x25:1.63				20x30:1.84	22x25:1.84				
470		20x30:1.90	22x30:1.86	25x25:1.86			20x35:1.91	22x30:1.91	25x25:2.08			
560		20x35:2.14	22x30:2.15	25x25:2.15			20x40:2.15	22x35:2.25	25x25:2.25			
680		20x40:2.35	22x35:2.35	25x30:2.33	30x25:2.33			22x35:2.48	25x30:2.50	30x25:2.46		
820			22x40:2.68	25x30:2.65	30x25:2.64			22x40:2.86	25x35:2.75	30x25:2.69		
1000			22x45:3.02	25x35:3.00	30x30:2.96			22x50:3.10	25x40:3.06	30x30:3.10		
1200				25x40:3.43	30x30:3.41	35x30:3.40			25x45:3.63	30x35:3.55	35x30:3.49	
1500				25x50:3.96	30x35:3.96	35x30:3.94				30x40:4.10	35x35:4.02	
1800					30x40:4.31	35x35:4.28				30x45:4.55	35x35:4.54	
2200					30x50:4.96	35x40:4.96					35x40:4.83	
2700						35x45:5.57					35x50:5.30	

Cap (μ F)	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		20x25:1.19					20x25:1.23					
270		20x25:1.39	22x25:1.37				20x30:1.46	22x25:1.42				
330		20x30:1.56	22x25:1.51				20x35:1.64	22x30:1.59				
390		20x35:1.74	22x30:1.73	25x25:1.71			20x35:1.79	22x30:1.80	25x25:1.75			
470		20x35:2.03	22x30:1.97	25x25:1.95			20x40:2.12	22x35:2.06	25x30:2.08			
560		20x40:2.18	22x35:2.18	25x30:2.15	30x25:2.15			22x40:2.22	25x35:2.38	30x25:2.18		
680			22x40:2.48	25x30:2.48	30x25:2.48			22x45:2.62	25x35:2.56	30x30:2.52		
820			22x45:2.81	25x35:2.79	30x30:2.75				25x45:2.91	30x35:2.84	35x30:2.79	
1000			22x50:3.28	25x40:3.28	30x35:3.15					30x35:3.36	35x30:3.29	
1200				25x45:3.61	30x35:3.61	35x30:3.57				30x40:3.72	35x35:3.68	
1500					30x45:4.13	35x35:4.06				30x50:4.18	35x40:4.10	
1800					30x50:4.60	35x40:4.59					35x45:4.52	
2200						35x45:5.25						

Cap (μ F)	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							20x30:1.00					
180		20x25:1.20					20x35:1.13	22x30:1.29	25x25:1.38			
220		20x25:1.26	22x25:1.24				20x35:1.29	22x30:1.41	25x25:1.47			
270		20x30:1.42	22x25:1.50					22x35:1.68	25x30:1.70			
330		20x35:1.68	22x30:1.66	25x25:1.61				22x40:1.91	25x35:1.94	30x25:1.98		
390		20x40:1.92	22x35:1.88	25x30:1.88				22x45:2.07	25x40:2.11	30x30:2.15		
470			22x35:2.15	25x35:2.15	30x25:2.04				25x50:2.31	30x35:2.38	35x30:2.36	
560			22x40:2.48	25x35:2.35	30x25:2.35					30x35:2.63	35x30:2.69	
680				25x40:2.67	30x30:2.71					30x45:2.80	35x35:3.05	
820				25x45:3.01	30x35:2.98	35x30:2.96				30x50:3.28	35x40:3.45	
1000					30x40:3.56	35x35:3.48					35x45:3.57	
1200					30x45:3.99	35x35:3.84						
1500						35x40:4.33						
1800						35x50:4.54						

Cap (μ F)	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							20x25:0.68					
82							20x30:0.74	22x25:0.76				
100							20x30:0.86	22x30:0.89				
120		20x30:0.96	22x25:1.04				20x35:0.96	22x30:0.98	25x25:1.02			
150		20x30:1.10	22x30:1.20	25x25:1.22			20x35:1.10	22x35:1.12	25x30:1.14			
180		20x35:1.24	22x30:1.34	25x25:1.37			20x40:1.27	22x35:1.27	25x30:1.30	30x25:1.37		
220			22x35:1.47	25x30:1.53	30x25:1.54			22x40:1.42	25x35:1.48	30x30:1.49		
270			22x40:1.70	25x35:1.73	30x25:1.80			22x50:1.60	25x40:1.61	30x30:1.64		
330			22x45:1.87	25x35:1.97	30x30:2.03				25x45:1.80	30x35:1.85	35x30:1.87	
390				25x40:2.14	30x35:2.23	35x30:2.30			25x50:2.04	30x40:2.05	35x35:2.07	
470				25x50:2.55	30x35:2.53	35x30:2.55				30x45:2.26	35x35:2.26	
560					30x40:2.73	35x35:2.75				30x50:2.57	35x40:2.59	
680					30x50:3.15	35x40:3.15					35x45:2.80	
820						35x45:3.47						
1000						35x50:3.60						

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

◆ STANDARD SIZE

Cap (μ F)	WV ϕ D	400					420						
		ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 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 (μ F)	WV ϕ D	450				
		ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 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 ϕ D x L (mm)