

USC SERIES

85°C Standard

*Load Life : 85°C 3000 hours.

RoHS
compliance



◆SPECIFICATIONS

Items	Characteristics																																											
Category Temperature Range	-40~+85℃								-25~+85℃																																			
Rated Voltage Range	10~250Vdc								315~450Vdc																																			
Capacitance Tolerance	±20% (20℃, 120Hz)																																											
Leakage Current(MAX)	I=3√CV (After 5 minutes application of rated voltage) I=Leakage Current(μA) C=Capacitance(μF) V=Rated Voltage(Vdc)																																											
Dissipation Factor(MAX) (tanδ)	<table><tr><td>Rated Voltage (Vdc)</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td><td>160~ 400</td><td>420~ 450</td></tr><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></table> (20℃, 120Hz)											Rated Voltage (Vdc)	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 (Vdc)	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																																		
Endurance	After applying rated voltage with rated ripple current for 3000 hours at 85℃, the capacitors shall meet the following requirements. <table><tr><td>Capacitance Change</td><td colspan="10">Within ±20% of the initial value.</td></tr><tr><td>Dissipation Factor</td><td colspan="10">Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td colspan="10">Not more than the specified value.</td></tr></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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Low Temperature Stability Impedance Ratio(MAX)	<table><tr><td>Rated Voltage (Vdc)</td><td>10~250</td><td>315~400</td><td>420~450</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>3</td><td>8</td><td>12</td></tr><tr><td>Z(-40℃)/Z(20℃)</td><td>12</td><td>—</td><td>—</td></tr></table> (120Hz)											Rated Voltage (Vdc)	10~250	315~400	420~450	Z(-25℃)/Z(20℃)	3	8	12	Z(-40℃)/Z(20℃)	12	—	—																					
Rated Voltage (Vdc)	10~250	315~400	420~450																																									
Z(-25℃)/Z(20℃)	3	8	12																																									
Z(-40℃)/Z(20℃)	12	—	—																																									

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency (Hz)	60(50)	120(100)	300	500	1k	10k≤
Coefficient						
10~100Vdc	0.90	1.00	1.03	1.05	1.10	1.15
160~250Vdc	0.80	1.00	1.15	1.20	1.30	1.50
315~450Vdc	0.80	1.00	1.15	1.20	1.25	1.40

◆OPTION

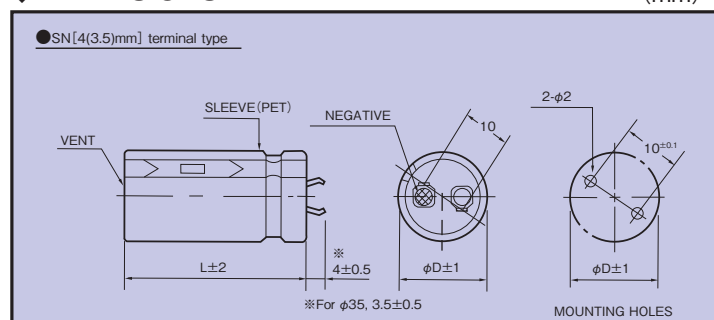
	Code
PET Sleeve without plate	EFC

◆PART NUMBER

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

◆DIMENSIONS

(mm)



◆ STANDARD SIZE

Cap (μ F)	Vdc 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							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				
18000		20×40	3.31	22×35	3.22	25×30	3.08				
22000				25×30	3.66	30×25	3.58				
27000			22×45	4.04	25×35	4.04	30×30	3.99			
33000			22×50	4.58	25×40	4.56	30×30	4.58			
39000				25×45	5.29	30×35	5.21	35×30	5.05		
47000				25×50	5.78	30×40	5.78	35×35	5.55		
56000						30×45	6.59	35×35	6.40		
68000						30×50	7.50	35×40	7.48		
82000						35×50	8.50				

Cap (μ F)	Vdc 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							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 (μ F)	Vdc 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							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 (μ F)	Vdc 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							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 ϕ D×L(mm)

◆ STANDARD SIZE

Cap (μF)	Vdc φD	160					180				
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35
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)	Vdc φD	200					220				
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35
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)	Vdc φD	250					315				
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35
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)	Vdc φD	350					385				
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35
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 φD×L(mm)

◆ STANDARD SIZE

Cap (μ F)	Vdc 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		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 (μ F)	Vdc ϕ D	450				
		ϕ 20	ϕ 22	ϕ 25	ϕ 30	ϕ 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 ϕ D×L(mm)