



USG SERIES

85°C Miniaturized, Snap-in Terminal Type

◆ FEATURES

- Load Life : 85°C 2000 hours.
- Smaller size than USC series.
- RoHS compliance.



◆ SPECIFICATIONS

Items	Characteristics													
Category Temperature Range	-40 ~ +85°C	-25 ~ +85°C												
Rated Voltage Range	160~250V.DC	400~450V.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)	0.2(20°C, 120Hz)													
Impedance Ratio(MAX)	<table border="1"> <thead> <tr> <th>Rated Voltage(V)</th> <th>160~250</th> <th>400</th> <th>420~450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</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)	160~250	400	420~450	Z(-25°C)/Z(20°C)	4	8	12	Z(-40°C)/Z(20°C)	12	-	-
Rated Voltage(V)	160~250	400	420~450											
Z(-25°C)/Z(20°C)	4	8	12											
Z(-40°C)/Z(20°C)	12	-	-											
Endurance	After applying rated voltage with rated ripple current for 2000 hrs 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.						
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.													

◆ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Frequency(Hz)	60(50)	120	500	1k	10k ≤	
Coefficient	160~250WV	0.80	1.00	1.20	1.30	1.50
	400~450WV	0.80	1.00	1.20	1.25	1.40

◆ PART NUMBER

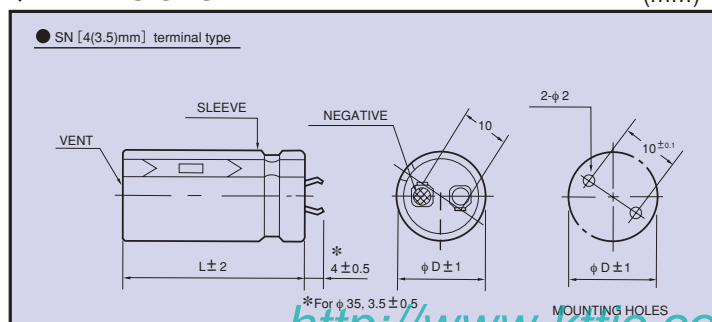
□□□ / **USG** / □□□□□ / □ / □□□ / **SN** / D×L
 Rated Voltage Series Rated Capacitance Capacitance Tolerance Option Terminal Code Case Size

◆ Option

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

◆ DIMENSIONS

(mm)





◆ STANDARD SIZE

Cap (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
390	20x25 1.19					20x25 1.84				
470	20x30 1.76	22x25 1.76				20x30 2.08	22x25 2.08			
560	20x30 2.25	22x25 2.25				20x35 2.25	22x30 2.25			
680	20x35 2.50	22x30 2.50	25x25 2.50			20x40 2.50	22x35 2.50	25x25 2.50		
820	20x40 2.75	22x35 2.75	25x30 2.75			20x45 2.75	22x40 2.75	25x30 2.75		
1000		22x40 3.00	25x30 3.00	30x25 3.00			22x45 3.00	25x35 3.00	30x25 3.00	
1200		22x45 3.25	25x35 3.25	30x30 3.25			22x50 3.31	25x40 3.31	30x30 3.31	35x25 3.31
1500			25x45 3.73	30x35 3.73				25x50 3.83	30x35 3.83	35x30 3.83
1800			25x50 4.20	30x35 4.20	35x30 4.20				30x40 4.32	35x35 4.32
2200				30x45 4.78	35x35 4.78				30x50 4.92	35x40 4.92
2700				30x50 5.45	35x40 5.45					35x45 5.52
3300					35x45 5.75					

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
270						20x25 1.42				
330	20x25 1.44					20x30 1.58	22x25 1.58			
390	20x30 1.68	22x25 1.68				20x35 1.75	22x30 1.75			
470	20x35 1.93	22x30 1.93	25x25 1.93			20x35 1.99	22x30 1.99	25x25 1.99		
560	20x35 2.43	22x30 2.43	25x25 2.43			20x40 2.28	22x35 2.28	25x30 2.28		
680	20x40 2.68	22x35 2.68	25x30 2.68	30x25 2.68			22x40 2.46	25x30 2.46	30x25 2.46	
820		22x40 2.93	25x30 2.93	30x25 2.93			22x45 2.81	25x35 2.81	30x30 2.81	
1000		22x45 3.25	25x35 3.25	30x30 3.25	35x25 3.25			25x45 3.29	30x30 3.29	
1200			25x45 3.50	30x35 3.50	35x30 3.50			25x50 3.60	30x35 3.60	35x30 3.60
1500			25x50 3.87	30x40 3.87	35x30 3.87				30x45 3.92	35x35 3.92
1800				30x45 4.32	35x35 4.32				30x50 4.30	35x40 4.30
2200				30x50 4.92	35x40 4.92					35x50 4.95
2700					35x50 5.45					

Cap (μF) \ WV / φ D	250					400				
	φ 20	φ 22	φ 25	φ 30	φ 35	φ 20	φ 22	φ 25	φ 30	φ 35
82						20x25 0.80				
100						20x30 0.94	22x25 0.94			
120						20x30 1.08	22x25 1.08			
150						20x35 1.21	22x30 1.21	25x25 1.21		
180						20x40 1.45	22x35 1.45	25x25 1.45		
220	20x25 1.23					22x40 1.58	25x30 1.58	30x25 1.58		
270	20x30 1.31	22x25 1.31				22x45 1.67	25x35 1.67	30x25 1.67		
330	20x30 1.75	22x25 1.75				22x50 1.90	25x40 1.90	30x30 1.90	35x25 1.90	
390	20x35 1.91	22x30 1.91	25x25 1.91				25x45 2.13	30x35 2.13	35x30 2.13	
470	20x40 2.11	22x35 2.11	25x25 2.11				25x50 2.39	30x40 2.39	35x30 2.39	
560		22x40 2.25	25x30 2.25	30x25 2.25					30x45 2.69	35x35 2.69
680		22x45 2.50	25x35 2.50	30x30 2.50						35x40 2.96
820			25x40 2.77	30x30 2.77	35x25 2.77					35x50 3.25
1000			25x45 3.32	30x35 3.32	35x30 3.32					
1200				30x40 3.84	35x35 3.84					
1500				30x50 4.25	35x40 4.25					
1800					35x45 4.55					

Cap (μF) \ WV / φ D	420					450				
	φ 20	φ 22	φ 25	φ 30	φ 35	φ 20	φ 22	φ 25	φ 30	φ 35
68						20x25 0.66				
82	20x25 0.83					20x25 0.83				
100	20x30 0.97	22x25 0.97				20x30 0.93	22x25 0.93			
120	20x30 1.08	22x25 1.08				20x35 1.04	22x30 1.04	25x25 1.04		
150	20x35 1.30	22x30 1.30	25x25 1.30			20x40 1.29	22x35 1.29	25x25 1.29		
180	20x40 1.48	22x35 1.48	25x30 1.48				22x40 1.40	25x30 1.40	30x25 1.40	
220		22x40 1.65	25x35 1.65	30x25 1.65			22x45 1.66	25x35 1.66	30x25 1.66	
270		22x50 1.94	25x35 1.94	30x30 1.94			22x50 1.81	25x40 1.81	30x30 1.81	35x25 1.81
330			25x45 2.17	30x35 2.17	35x30 2.17			25x45 2.10	30x35 2.10	35x30 2.10
390			25x50 2.27	30x35 2.27	35x30 2.27				30x40 2.32	35x35 2.32
470				30x40 2.61	35x35 2.61				30x45 2.66	35x40 2.66
560				30x50 2.82	35x40 2.82					35x40 2.82
680					35x45 3.11					35x50 3.00

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