

**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) (tan δ)	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.						
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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**

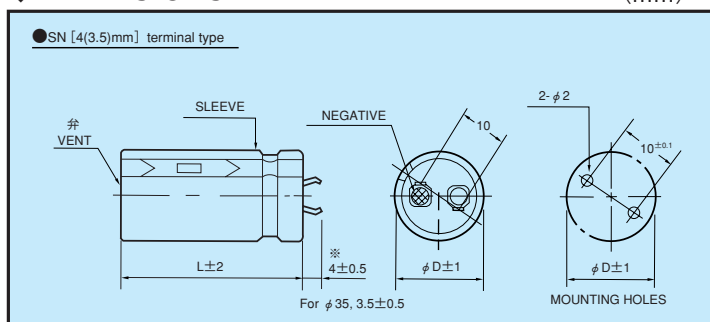
   USG                OOE    SN    D×L  
 Rated Voltage    Series    Rated Capacitance    Capacitance Tolerance    Option    Terminal Code    Case Size

**◆Option**

	Code
without plate	OOE
with plate	Blank

**◆DIMENSIONS**

(mm)





◆ STANDARD SIZE, RATED RIPPLE CURRENT

Cap ( $\mu$ F)	WV $\phi$ D	160					180				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
390		20×25; 1.19					20×25; 1.84				
470		20×30; 1.76	22×25; 1.76				20×30; 2.08	22×25; 2.08			
560		20×30; 2.25	22×25; 2.25				20×35; 2.25	22×30; 2.25			
680		20×35; 2.50	22×30; 2.50	25×25; 2.50			20×40; 2.50	22×35; 2.50	25×25; 2.50		
820		20×40; 2.75	22×35; 2.75	25×30; 2.75			20×45; 2.75	22×40; 2.75	25×30; 2.75		
1000			22×40; 3.00	25×30; 3.00	30×25; 3.00			22×45; 3.00	25×35; 3.00	30×25; 3.00	
1200			22×45; 3.25	25×35; 3.25	30×30; 3.25			22×50; 3.31	25×40; 3.31	30×30; 3.31	35×25; 3.31
1500				25×45; 3.73	30×35; 3.73				25×50; 3.83	30×35; 3.83	35×30; 3.83
1800				25×50; 4.20	30×35; 4.20	35×30; 4.20				30×40; 4.32	35×35; 4.32
2200					30×45; 4.78	35×35; 4.78				30×50; 4.92	35×40; 4.92
2700					30×50; 5.45	35×40; 5.45					35×45; 5.52
3300						35×45; 5.75					

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
270							20×25; 1.42				
330		20×25; 1.44					20×30; 1.58	22×25; 1.58			
390		20×30; 1.68	22×25; 1.68				20×35; 1.75	22×30; 1.75			
470		20×35; 1.93	22×30; 1.93	25×25; 1.93			20×35; 1.99	22×30; 1.99	25×25; 1.99		
560		20×35; 2.43	22×30; 2.43	25×25; 2.43			20×40; 2.28	22×35; 2.28	25×30; 2.28		
680		20×40; 2.68	22×35; 2.68	25×30; 2.68	30×25; 2.68			22×40; 2.46	25×30; 2.46	30×25; 2.46	
820			22×40; 2.93	25×30; 2.93	30×25; 2.93			22×45; 2.81	25×35; 2.81	30×30; 2.81	
1000			22×45; 3.25	25×35; 3.25	30×30; 3.25	35×25; 3.25			25×45; 3.29	30×30; 3.29	
1200				25×45; 3.50	30×35; 3.50	35×30; 3.50			25×50; 3.60	30×35; 3.60	35×30; 3.60
1500				25×50; 3.87	30×40; 3.87	35×30; 3.87				30×45; 3.92	35×35; 3.92
1800					30×45; 4.32	35×35; 4.32				30×50; 4.30	35×40; 4.30
2200					30×50; 4.92	35×40; 4.92					35×50; 4.95
2700						35×50; 5.45					

Cap ( $\mu$ F)	WV $\phi$ D	250					400				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
82							20×25; 0.80				
100							20×30; 0.94	22×25; 0.94			
120							20×30; 1.08	22×25; 1.08			
150							20×35; 1.21	22×30; 1.21	25×25; 1.21		
180							20×40; 1.45	22×35; 1.45	25×25; 1.45		
220		20×25; 1.23						22×40; 1.58	25×30; 1.58	30×25; 1.58	
270		20×30; 1.31	22×25; 1.31					22×45; 1.67	25×35; 1.67	30×25; 1.67	
330		20×30; 1.75	22×25; 1.75					22×50; 1.90	25×40; 1.90	30×30; 1.90	35×25; 1.90
390		20×35; 1.91	22×30; 1.91	25×25; 1.91					25×45; 2.13	30×35; 2.13	35×30; 2.13
470		20×40; 2.11	22×35; 2.11	25×25; 2.11					25×50; 2.39	30×40; 2.39	35×30; 2.39
560			22×40; 2.25	25×30; 2.25	30×25; 2.25					30×45; 2.69	35×35; 2.69
680			22×45; 2.50	25×35; 2.50	30×30; 2.50						35×40; 2.96
820				25×40; 2.77	30×30; 2.77	35×25; 2.77					35×50; 3.25
1000				25×45; 3.32	30×35; 3.32	35×30; 3.32					
1200					30×40; 3.84	35×35; 3.84					
1500					30×50; 4.25	35×40; 4.25					
1800						35×45; 4.55					

Cap ( $\mu$ F)	WV $\phi$ D	420					450				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
68							20×25; 0.66				
82		20×25; 0.83					20×25; 0.83				
100		20×30; 0.97	22×25; 0.97				20×30; 0.93	22×25; 0.93			
120		20×30; 1.08	22×25; 1.08				20×35; 1.04	22×30; 1.04	25×25; 1.04		
150		20×35; 1.30	22×30; 1.30	25×25; 1.30			20×40; 1.29	22×35; 1.29	25×25; 1.29		
180		20×40; 1.48	22×35; 1.48	25×30; 1.48				22×40; 1.40	25×30; 1.40	30×25; 1.40	
220			22×40; 1.65	25×35; 1.65	30×25; 1.65			22×45; 1.66	25×35; 1.66	30×25; 1.66	
270			22×50; 1.94	25×35; 1.94	30×30; 1.94			22×50; 1.81	25×40; 1.81	30×30; 1.81	35×25; 1.81
330				25×45; 2.17	30×35; 2.17	35×30; 2.17			25×45; 2.10	30×35; 2.10	35×30; 2.10
390				25×50; 2.27	30×35; 2.27	35×30; 2.27				30×40; 2.32	35×35; 2.32
470					30×40; 2.61	35×35; 2.61				30×45; 2.66	35×40; 2.66
560					30×50; 2.82	35×40; 2.82					35×40; 2.82
680						35×45; 3.11					35×50; 3.00

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