

## USG SERIES

## UPGRADE

85°C Super Miniaturized, Snap-in Terminal Type

### ◆ FEATURES

- Load Life : 85°C 2000 hours.
- Smaller size than USC series.
- Expanded rated voltage range.



### ◆ 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)	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> <th>(120Hz)</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>8</td> <td>12</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>12</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Rated Voltage (V)	160~250	400	420~450	(120Hz)	Z(-25°C)/Z(20°C)	4	8	12		Z(-40°C)/Z(20°C)	12			
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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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### ◆ EXPLANATION OF PART NUMBER

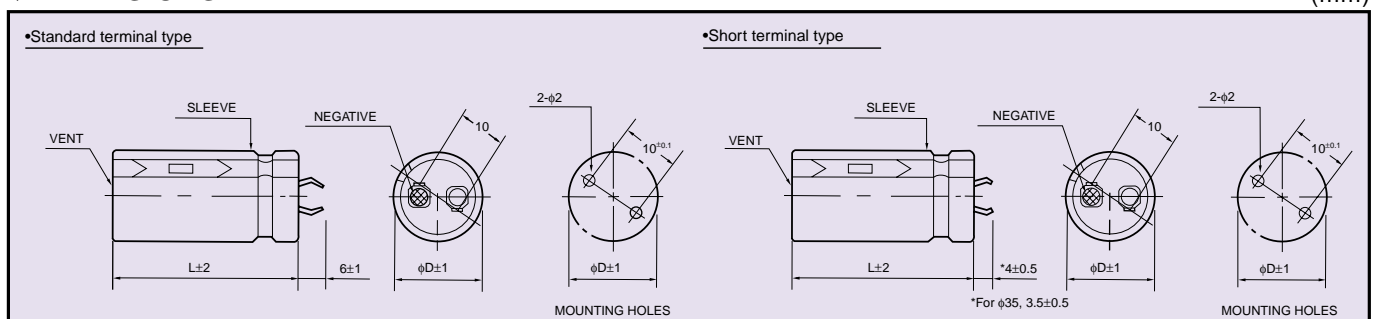
□□□    USG    □□□□□    □    □□□    □□    DxL  
 Rated Voltage    Series    Rated Capacitance    Capacitance Tolerance    Option    Terminal Code    Case Size

### ◆ Terminal Code

	Code
Standard Terminal	Blank
Short Terminal	ST

### ◆ DIMENSIONS

(mm)





# LARGE CAN TYPE ALUMINUM ELECTROLYTIC CAPACITORS USG

## ◆ STANDARD SIZE, RATED RIPPLE CURRENT

Cap (μF)	WV φD	160					180									
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35					
390	20x25	1.19					20x25	1.84								
470	20x30	1.76	22x25	1.76			20x30	2.08	22x25	2.08						
560	20x30	2.25	22x30	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			22x45	3.00	25x35	3.00	30x25	3.00		
1200			22x45	3.25	25x35	3.25	30x30	3.25			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 φD	200					220										
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35						
270							20x25	1.42									
330	20x25	1.44					20x30	1.58	22x25	1.58							
390	20x30	1.66	22x25	1.66			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	2.08	22x30	2.08	25x25	2.08	20x40	2.28	22x35	2.28	25x30	2.28					
680	20x40	2.36	22x35	2.36	25x30	2.36	30x25	2.36		22x40	2.46	25x30	2.46	30x25	2.46		
820			22x40	2.68	25x30	2.68	30x25	2.68		22x45	2.81	25x35	2.81	30x30	2.81		
1000			22x45	3.12	25x35	3.12	30x30	3.12	35x25	3.12			25x45	3.29	30x30	3.29	
1200					25x45	3.44	30x35	3.44	35x30	3.44		25x50	3.60	30x35	3.60	35x30	3.60
1500					25x50	3.87	30x40	3.87	35x35	3.87			30x45	3.92	35x35	3.92	
1800							30x45	4.32	35x35	4.32			30x50	4.30	35x40	4.30	
2200									35x45	4.92					35x50	4.95	
2700									35x50	5.45							

Cap (μF)	WV φD	250					400									
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35					
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	25x30	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	30x30	1.67		
330	20x30	1.75	22x25	1.75							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							30x40	2.39	35x35	2.39
560			22x40	2.25	25x30	2.25	30x25	2.25					30x45	2.69	35x40	2.69
680			22x45	2.50	25x35	2.50	30x30	2.50							35x45	2.96
820					25x40	2.77	30x30	2.77	35x25	2.77					35x50	3.25
1000					25x50	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 φD	420					450										
		φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35						
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 φD<sup>2</sup>×L<sup>2</sup>(mm)

## ◆ MULTIPLIER FOR RIPPLE CURRENT

(1) Temperature coefficient

Ambient Temperature(°C)	85	65≥
Coefficient	1.0	1.3

(2) 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