UW Higher Capacitance Range
宽温大型品

- 105℃, 5000 hours assured, Higher capacitance range.
  105℃,负荷寿命 5000 小时宽温大型品。
- Case diameter Φ12.5mm ~ Φ20mm.
  产品直径 Φ12.5mm ~ Φ20mm.
- Available for high density surface mounting.
  适用于高密度表面组装。
- High stability and reliability.
  性能稳定，可靠性高。

■Specifications 特性表

Items 项目	Characteristics 主要特性	
Rated Voltage Range 额定工作电压范围	6.3 ~ 100V_{dc}	160 ~450V_{dc}
Category Temperature Range 使用温度范围	-55 ~ +105℃	-40 ~ +105℃
Capacitance Tolerance 静电容量允许偏差	±20% (M), at 20℃, 120Hz	
Leakage Current 漏电流, 20℃环境下施加工作电压 2 分钟后. (at 20℃,After 2 minutes)	I≤0.01CV or 3uA， whichever is greater 漏电流≤0.01CV or 3uA，取较大值	I≤0.04CV +100uA
	Where, I : Max. leakage current (漏电流, μA), C : Nominal capacitance (静电容量, μF), V : Rated voltage (额定电压 V)	

Dissipation Factor (Tanδ, at 20℃ ,120Hz)
损耗角正切值 (测试条件为 20℃,120Hz)

Rated voltage (V) 额定工作电压	6.3	10	16	25	35	50	63	100	160~250	400~450
Tanδ (Max.) 最大损耗角正切	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.15	0.20

When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase.
静电容量大于1000uF，每增加1000uF，损耗角正切增加0.02

Low Temperature Characteristics
(Max. Impedance Ratio, 120Hz)
低温特性最大阻抗比

Rated voltage (V) 额定工作电压	6.3	10	16	25	35	50	63	100	160~250	400~450
Z(-25℃)/Z(20℃)	5	4	3	2	2	5	2	2	3	6
Z(-40℃)/Z(20℃)	10	8	6	4	3	3	3	3	6	10

Endurance
耐久性

The following specification shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the ripple current is applied for the specified period of time at 105℃.
在 105℃环境中,不超过额定电压的范围下叠加额定纹波电流，连续加载规定时间的额定电压后，待温度恢复到 20℃进行测量时，应满足以下要求。

Test Time 测试时间	5,000Hrs
Capacitance Change 静电容量变化率	Within ±30% initial value 初始值的±30%以内
Dissipation Factor 损耗角正切	≤200% of specified value 不大于规范值的 200%
Leakage Current 漏电流	≤The initial specified value 不大于规范值

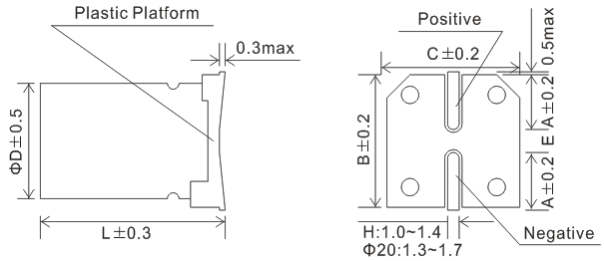
Shelf Life
高温贮存

The above specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of IEC 60384-4.
在 105℃环境中，无负荷放置 1,000 小时后待温度恢复到 20℃，进行试验前处理(IEC 60384-4 4.1 项)后进行测量时，应满足以下要求.

Capacitance Change 静电容量变化率	Within ±30% initial value 初始值的±30%以内
Dissipation Factor 损耗角正切值	≤200% of specified value 不大于规范值的 200%
Leakage Current 漏电流	≤200% of specified value 不大于规范值的 200%

■Drawing(Unit: mm) 外形图

(Φ12.5 ~Φ20)



Case size 产品尺寸	A	B	C	E	L	H
Φ12.5x13.5	4.8	13.6	13.6	4.0	13.5	1.0~1.4
Φ12.5x16	4.8	13.6	13.6	4.0	16	1.0~1.4
Φ12.5x21	4.8	13.6	13.6	4.0	21	1.0~1.4
Φ16x16.5	5.4	17.1	17.1	6.3	16.5	1.0~1.4
Φ16x21.5	5.4	17.1	17.1	6.3	21.5	1.0~1.4
Φ18x16.5	6.4	19.1	19.1	6.3	16.5	1.0~1.4
Φ18x21.5	6.4	19.1	19.1	6.3	21.5	1.0~1.4
Φ20x16.5	6.2	21.1	21.1	8.8	16.5	1.3~1.7
Φ20x21.5	6.2	21.1	21.1	8.8	21.5	1.3~1.7

■Rated ripple current multipliers(Unit: mm) 额定纹波修正系数

Frequency 频率 (Hz)			60Hz	120Hz	300Hz	1KHz	10KHz~
Coefficient 系数	6.3~100WV	＜68	0.75	1.00	1.35	1.57	2.00
		100~470	0.80	1.00	1.23	1.34	1.5
		1000~6800	0.85	1.00	1.10	1.13	1.15
	160~450WV	3.3~100	0.80	1.00	0.75	1.40	1.60

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use, the rms ripple current has to be reduced.
铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化，每升温 5℃寿命减少一半。要想保持长寿命请在使用过程中降低纹波电流。

UW Series

■Standard ratings 标准品一览表

WV / μF	6.3		10		16		25		35		50	
	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.
220									12.5x13.5	280	12.5x16	320
330							12.5x13.5	320	12.5x16	360	16x16.5	440
470					12.5x13.5	360	12.5x16	400	16x16.5	490	18x16.5	550
1000					16x16.5	630	18x16.5	700	18x16.5	750	18x21.5	820
2200	16x16.5	750	16x16.5	810	18x16.5	930	18x21.5	1050	20x21.5	1150		
3300	18x16.5	930	18x16.5	1000	18x21.5	1150						
4700	18x21.5	1100	18x21.5	1200								
6800	20x21.5	1350	20x21.5	1450								

WV / μF	63		100		160		200		250		400		450	
	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.
3.3													12.5x13.5	40
4.7									12.5x13.5	65	12.5x16	50	12.5x16	50
10							12.5x13.5	80	12.5x16	105	16x16.5	85	16x16.5	85
22							12.5x16	105	16x16.5	180	18x21.5	130	18x21.5	130
33					12.5x13.5	96	16x16.5	220	18x16.5	230	20x21.5	160	20x21.5	160
47			12.5x13.5	160	16x16.5	260	18x16.5	270	18x21.5	280				
68	12.5x13.5	175	12.5x16	205	18x16.5	320	18x21.5	330	20x21.5	340				
100	12.5x16	225	16x16.5	285	16x21.5	380	20x21.5	410						
220	16x16.5	385	18x16.5	440										
330	18x16.5	490	20x21.5	500										
470	18x21.5	590												

Note1: Case size ΦD x L(mm), ripple current (mA, rms) at 105℃, 120Hz. 尺寸 ΦD x L(mm)，纹波电流於 105℃, 120Hz
Note2: Produce custom product too, which are not found in these tables. 客户定制品不在标准品一览表内