

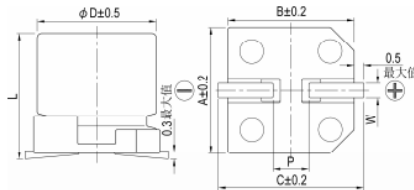
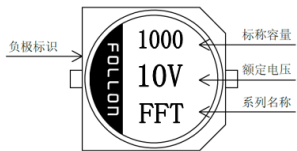
- 105°C 2000hours assured
105°C 2000H寿命保证
- Miniaturization Ultea low ESR,
小型化, 极低等效串联电阻 (ESR)
- RoHS compliance 符合RoHS指令



Specifications 特性表

Items 项目	Characteristics 主要特性																				
Operation Temperature Range 使用温度范围	-55°C ~ 105°C																				
Voltage Range 额定电压范围	2.5~50V																				
Capacitance Range 额定容量范围	10~2200																				
Capacitance Tolerance 额定容量容许误差值	±20% at 120Hz, 20°C																				
Dissipation Factor (Tan δ) 损失角	<table border="1"> <tr> <td>Rated Voltage 额定电压 (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Tan δ (max) 损失角最大值</td> <td>0.26</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table>	Rated Voltage 额定电压 (V)	6.3	10	16	25	35	50	Tan δ (max) 损失角最大值	0.26	0.19	0.16	0.14	0.12	0.10						
	Rated Voltage 额定电压 (V)	6.3	10	16	25	35	50														
Tan δ (max) 损失角最大值	0.26	0.19	0.16	0.14	0.12	0.10															
When the capacitance exceeds 1,000 μF, 0.02 shall be added every 1,000 μF increase. 当额定静电容量大于 1,000 微法拉时, 每增加 1,000 微法拉需加 0.02.																					
Leakage Current 漏电流	I = 0.01CV or 3(μA) whichever is greater (after 2 minutes) Where, C=rated capacitance in μF, V=rated DC working voltage in V I = 0.01CV 或 3(μA) 之中任一个较大值以下 (2 分钟后) I = 漏电流 (μA/微安)、C = 额定静电容量 (μF/微法拉)、V = 额定直流工作电压 (V/伏特)																				
Stability at Low Temperature 低温特性 (at 120Hz)	Impedance ratio shall not exceed the values given in the table below 阻抗比不可大于下表所列数值 <table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td rowspan="2">Impedance ratio</td> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C)/Z(20°C)</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Rated Voltage	6.3	10	16	25	35	50	Impedance ratio	Z(-25°C)/Z(20°C)	4	3	2	2	2	Z(-55°C)/Z(20°C)	8	5	4	3	3
Rated Voltage	6.3	10	16	25	35	50															
Impedance ratio	Z(-25°C)/Z(20°C)	4	3	2	2	2															
	Z(-55°C)/Z(20°C)	8	5	4	3	3															
Endurance 耐久性	After 2000Hrs. Application of the rated voltage at 105 °C, returned to 20 °C for testing, they meet the characteristics listed below. 在 105°C 下连续施加额定电压 2000 小时后, 返回 20°C 进行测试时, 满足以下项目 <table border="1"> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±30% of initial value ≤ 初始值的 ±30%</td> </tr> <tr> <td>Tan δ 损失角</td> <td>Less than 300% of specified value ≤ 初始值的 300%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>Within specified value ≤ 初始规格值</td> </tr> </table>	Capacitance Change 静电容量变化率	Within ±30% of initial value ≤ 初始值的 ±30%	Tan δ 损失角	Less than 300% of specified value ≤ 初始值的 300%	Leakage Current 漏电流	Within specified value ≤ 初始规格值														
Capacitance Change 静电容量变化率	Within ±30% of initial value ≤ 初始值的 ±30%																				
Tan δ 损失角	Less than 300% of specified value ≤ 初始值的 300%																				
Leakage Current 漏电流	Within specified value ≤ 初始规格值																				
Shelf Life 高温储存特性	After leaving capacitors under no load at 105 °C for 1000Hrs, they meet the specified value for load life characteristics listed above. 在 105°C 环境中无负荷放置 1000 小时后, 电容器的特性符合高温负荷特性中所列的规定值。																				
Resistance to Soldering Heat 焊接耐热性	After reflow soldering and restored at room temperature, they meet the specified value for load life characteristics Listed below. 经过回流焊并冷却至室温后, 电容器的特性符合下表的要求。 <table border="1"> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±10% of initial value ≤ 初始值的 ±10%</td> </tr> <tr> <td>Tan δ 损失角</td> <td>Within specified value ≤ 初始规格值</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>Within specified value ≤ 初始规格值</td> </tr> </table>	Capacitance Change 静电容量变化率	Within ±10% of initial value ≤ 初始值的 ±10%	Tan δ 损失角	Within specified value ≤ 初始规格值	Leakage Current 漏电流	Within specified value ≤ 初始规格值														
Capacitance Change 静电容量变化率	Within ±10% of initial value ≤ 初始值的 ±10%																				
Tan δ 损失角	Within specified value ≤ 初始规格值																				
Leakage Current 漏电流	Within specified value ≤ 初始规格值																				
Marking 标识	Black print on the case top. 铝壳顶部黑色印刷。																				

DRAWING (Unit: mm) 外形图



DIMENSIONS (Unit:mm) 尺寸表

单位: mm

尺寸	4X5.8	5X5.8	6.3X5.8	6.3X7.7	8X10.5	10X10.5
ΦD	4.0	5.0	6.3	6.3	8.0	10.0
L	5.8±0.3	5.8±0.3	5.8±0.3	7.7±0.3	10.5±0.3	10.5±0.3
A	4.3	5.3	6.6	6.6	8.3	10.3
B	4.3	5.3	6.6	6.6	8.3	10.3
C	5.1	5.9	7.2	7.2	9.0	11.0
P±0.2	1.0	1.5	2.0	2.0	3.1	4.7
W	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.7~1.1	0.7~1.3

Specifications 标准品一览表

code μ F		6.3			10			16		
		0J			1A			1C		
47	470							4X5.8	0.85	160
68	680				4X5.8	0.85	160	5X5.8	0.36	240
100	101	4X5.8	0.85	160				5X5.8	0.36	240
150	151				5X5.8	0.36	240	6.3X5.8	0.26	300
220	221	5X5.8	0.36	240	6.3X5.8	0.26	300	6.3X5.8	0.26	300
330	331	6.3X5.8	0.26	300	6.3X7.7	0.16	600	6.3X7.7	0.16	600
470	471	6.3X7.7	0.16	600	6.3X7.7	0.16	600			
680	681	6.3X7.7	0.16	600				8X10.5	0.08	850
820	821							8X10.5	0.08	850
1000	102				8X10.5	0.08	850	10X10.5	0.06	1190
1200	122							10X10.5	0.06	1190
1500	152	8X10.5	0.08	850	10X10.5	0.06	1190			
2200	222	10X10.5	0.06	1190						

code μ F		25			35			50		
		1E			1V			1H		
10	100							4X5.8	2.30	85
								5X5.8	0.88	165
22	220	4X5.8	0.85	160	4X5.8	0.85	160	5X5.8	0.88	165
33	330	4X5.8	0.85	160	5X5.8	0.36	240			
47	470	5X5.8	0.36	240	5X5.8	0.36	240	6.3X5.8	0.68	195
68	680	5X5.8	0.36	240	6.3X5.8	0.26	300			
100	101	6.3X5.8	0.26	300	6.3X5.8	0.26	300	6.3X7.7	0.34	350
150	151	6.3X7.7	0.16	600	6.3X7.7	0.16	600			
220	221	6.3X7.7	0.16	600				8X10.5	0.18	670
330	331				8X10.5	0.08	850	10X10.5	0.12	900
390	391				8X10.5	0.08	850			
470	471	8X10.5	0.08	850				Case size ΦDXL(mm) 尺寸	Impedance (Ω) at 20°C, 100KHZ 阻抗值	Ripple current (mA/rms)at 10°C 100KHZ 纹波电流
560	561	8X10.5	0.08	850	10X10.5	0.06	1190			
680	681				10X10.5	0.06	1190			
820	821	10X10.5	0.06	1190						
1000	102	10X10.5	0.06	1190						

●Case size ΦD XL(mm), Impedance (Ω) at 20°C, 100KHZ, ripple current (mA rms) at 105°C, 100KHZ

●尺寸 ΦD XL(mm), 阻抗值 (Ω) 于 20°C, 100KHZ 纹波电流 (mA rms) 于 105°C, 100KHZ

□Ripple Current and Frequency Multipliers 纹波电流与频率修正系数

Frequency 频率	Frequency Multipliers			
	120HZ	1KHZ	10KHZ	100KHZ~
10~470	0.65	0.85	0.95	1.00
560~2200	0.70	0.90	0.95	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 10°C rise. When long life performance is required in actual use, the 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10°C 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。

●Taping specifications are given in page 15" Taping Specifications" . 编带标准请参阅第15页" 编带标准 "

●Please refer to page 16" Package Quantity" for the minimum package quantity.最小包装数量请参阅第16页" 包装数量 "