



UW 片式鋁電解電容

UW Chip Type Aluminum Electrolytic Capacitors

■ 產品特點 Features

- 長壽命品 Long life product
- 產品直徑 Case diameter Φ 4mm~ Φ 18mm
- 適用於再回流焊 Reflow soldering is available
- 適用於高密度表面組裝 Available for high density surface mounting
- 壽命 105°C 10000 小時長壽命品 Life time 105°C 10000hrs Long life product
- 性能穩定, 可靠性高 High stability and reliability
- ROHS 指令已對應完畢 Adapted to the RoHS directive

■ 主要技術性能 Specifications

| 項目 Items | 特性 Characteristics | | | | | | | | | |
|---|---|---|------|------|---|---|------|---------|----------|--|
| 工作溫度範圍 Category Temperature Range | -40°C~+105°C | | | | | | | | | |
| 額定電壓範圍 Rated Voltage Range | 6.3~450V.DC | | | | | | | | | |
| 標稱電容量範圍 Nominal Capacitance Range | 1 μ F ~ 1000 μ F | | | | | | | | | |
| 標稱電容量允許偏差 Nominal Capacitance Tolerance | $\pm 20\%$ (120Hz, +20°C) | | | | | | | | | |
| 洩漏電流範圍 Leakage Current(MAX) | 6.3V~50Vdc | | | | 160V~450Vdc | | | | (20°C) | |
| | I $\leq 0.03CV(\mu A)$ or 4 (μA) 取較大者 whichever is greater(after 2 minutes) | | | | I $\leq 0.04CV+100(\mu A)$ (after 2 minutes) | | | | | |
| 損耗角正切值 Dissipation Factor(MAX) Tan δ (20°C,120Hz) | Rated Voltage(V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 160~250 | 400~450 | |
| | Tan δ | 0.32 | 0.28 | 0.26 | 0.16 | 0.14 | 0.14 | 0.20 | 0.24 | |
| 耐久性 Load Life | 在105°C環境中, 連續施加額定電壓10000H, 常溫恢復16小時後進行測量時, 電容器應滿足以下要求。 In 105°C degrees Celsius environment, continuous application of rated voltage for 10000 hours, After 16 hours were measured at room temperature, the capacitors shall meet the following requirements | | | | | | | | | |
| | Rated Voltage(V) | 6.3V~50V | | | | 160V~450V | | | | |
| | Capacitance Change | $\pm 30\%$ 初始值以內 Within $\pm 30\%$ of the initial value | | | | $\pm 20\%$ 初始值以內 Within $\pm 20\%$ of the initial value | | | | |
| | Dissipation Factor | $\leq 300\%$ 初始值以內 Not more than 300% of the specified value | | | | $\leq 200\%$ 初始值以內 Not more than 200% of the specified value | | | | |
| | Leakage Current | \leq 初始規定值 Not more than the specified value | | | | \leq 初始規定值 Not more than the specified value | | | | |
| 高溫貯存 Shelf Life | 在105°C環境中, 無負荷放置1000小時, 常溫恢復16小時後進行測量時, 電容器應滿足以下要求。 In 105°C degrees Celsius environment, without load for 1000 hours, After 16 hours were measured at room temperature, the capacitors shall meet the following requirements | | | | | | | | | |
| | Rated Voltage(V) | 6.3V~50V | | | | 160V~450V | | | | |
| | Capacitance Change | $\pm 30\%$ 初始值以內 Within $\pm 30\%$ of the initial value | | | | $\pm 20\%$ 初始值以內 Within $\pm 20\%$ of the initial value | | | | |
| | Dissipation Factor | $\leq 300\%$ 初始值以內 Not more than 300% of the specified value | | | | $\leq 200\%$ 初始值以內 Not more than 200% of the specified value | | | | |
| | Leakage Current | $\leq 300\%$ 初始規定值 within 300% of initial specified value | | | | $\leq 200\%$ 初始規定值 within 200% of initial specified value | | | | |
| 耐焊接熱 Resistance to Soldering Heat | 在250°C的條件下, 電容器在熱板上保持30秒, 然後從熱板上取出電容器, 讓其在室溫下恢復, 電容器應滿足以下要求。 The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement: | | | | | | | | | |
| | Capacitance Change | $\pm 10\%$ 初始值以內 Within $\pm 10\%$ of the initial value | | | | | | | | |
| | Dissipation Factor | \leq 初始規定值 Not more than the initial specified value | | | | | | | | |
| | Leakage Current | \leq 初始規定值 Not more than the initial specified value | | | | | | | | |
| 低溫特性及阻抗比 Low Temperature Stability Impedance Ratio (MAX) 120Hz | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 160~250 | 400~450 | |
| | Z-25°C/Z+20°C | 4 | 3 | 2 | 2 | 2 | 2 | 6 | 6 | |
| | Z-40°C/Z+20°C | 10 | 8 | 6 | 4 | 3 | 3 | 10 | 18 | |
| 其它 Other | IEC 60384 JIS-C5101 | | | | | | | | | |

■ 尺寸圖 Dimensions

單位: mm

Fig. 1 ($\Phi 4\sim\Phi 10$)

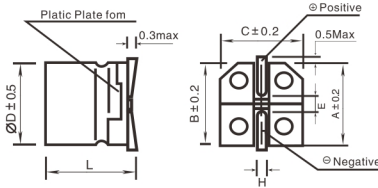
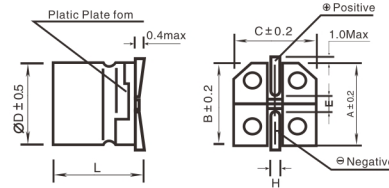


Fig. 2 ($\geq \Phi 12.5$)



| ΦD | L | A | B | C | E | H | Fig.No. |
|----------|----------------|------|------|------|-----|---------|---------|
| 6.3 | 7.7 ± 0.3 | 7.2 | 6.6 | 6.6 | 2.1 | 0.5~0.9 | 1 |
| 6.3 | 10.2 ± 0.3 | 7.2 | 6.6 | 6.6 | 2.1 | 0.5~0.9 | 1 |
| 8 | 10.2 ± 0.5 | 9.1 | 8.3 | 8.3 | 3.1 | 0.8~1.1 | 1 |
| 8 | 12.5 ± 0.5 | 9.1 | 8.3 | 8.3 | 3.1 | 0.8~1.1 | 1 |
| 10 | 10.2 ± 0.5 | 11.1 | 10.3 | 10.3 | 4.5 | 0.8~1.1 | 1 |
| 10 | 12.5 ± 0.5 | 11.1 | 10.3 | 10.3 | 4.5 | 0.8~1.1 | 1 |
| 12.5 | 13.5 ± 0.5 | 13.7 | 13.0 | 13.0 | 4.4 | 1.0~1.4 | 2 |
| 12.5 | 16 ± 0.5 | 13.7 | 13.0 | 13.0 | 4.4 | 1.0~1.4 | 2 |
| 16 | 16.5 ± 0.5 | 18.0 | 17.0 | 17.0 | 6.4 | 1.0~1.4 | 2 |
| 16 | 21.5 ± 0.5 | 18.0 | 17.0 | 17.0 | 6.4 | 1.0~1.4 | 2 |
| 18 | 16.5 ± 0.5 | 20.0 | 19.0 | 19.0 | 6.4 | 1.0~1.4 | 2 |
| 18 | 21.5 ± 0.5 | 20.0 | 19.0 | 19.0 | 6.4 | 1.0~1.4 | 2 |

■ 標準品一覽表 Standard Size

| WV | 6.3 | | | 10 | | | 16 | | | 25 | | |
|------|---------|-------|-----|---------|-------|-----|---------|-------|-----|---------|-------|-----|
| uF殼號 | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA |
| 10 | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | |
| 33 | | | | | | | | | | 6.3×7.7 | 0.16 | 48 |
| 47 | | | | | | | 6.3×7.7 | 0.26 | 50 | | | |
| 100 | 6.3×7.7 | 0.32 | 60 | 6.3×5.4 | 0.28 | 70 | | | | 8×10.2 | 0.16 | 119 |
| 220 | | | | 8×10.2 | 0.28 | 145 | 8×10.2 | 0.26 | 159 | | | |
| 330 | 8×10.2 | 0.32 | 165 | | | | 8×10.2 | 0.26 | 194 | | | |
| 470 | 8×10.2 | 0.32 | 196 | | | | 10×10.2 | 0.26 | 260 | | | |
| 1000 | 10×10.2 | 0.32 | 315 | | | | | | | | | |

| WV | 35 | | | 50 | | | 160 | | | 200 | | |
|------|---------|-------|-----|--------|-------|----|-----------|-------|-----|-----------|-------|-----|
| uF殼號 | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA |
| 1 | | | | | | | | | | | | |
| 2.2 | | | | | | | | | | | | |
| 3.3 | | | | | | | | | | | | |
| 4.7 | | | | | | | | | | | | |
| 10 | 6.3×7.7 | 0.14 | 31 | | | | 10×10.2 | 0.20 | 95 | 12.5×13.5 | 0.20 | 110 |
| 15 | | | | | | | 12.5×13.5 | 0.20 | 140 | 12.5×13.5 | 0.20 | 140 |
| 22 | 6.3×7.7 | 0.14 | 43 | | | | 12.5×16 | 0.20 | 200 | 12.5×16 | 0.20 | 200 |
| 33 | 6.3×8.7 | 0.14 | 59 | 8×10.2 | 0.14 | 79 | 16×16.5 | 0.20 | 280 | 16×21.5 | 0.20 | 250 |
| 47 | 8×10.2 | 0.14 | 90 | 8×10.2 | 0.14 | 95 | 16×16.5 | 0.20 | 320 | 18×16.5 | 0.20 | 245 |
| 56 | | | | | | | | | | 16×21.5 | 0.20 | 330 |
| 68 | | | | | | | | | | 18×21.5 | 0.20 | 350 |
| 100 | 8×10.2 | 0.14 | 132 | | | | 16×16.5 | 0.20 | 349 | 18×21.5 | 0.20 | 382 |
| 220 | 10×10.2 | 0.14 | 220 | | | | 16×21.5 | 0.20 | 400 | 18×21.5 | 0.20 | 430 |

| WV | 250 | | | 400 | | | 450 | | |
|------|-----------|-------|-----|-----------|-------|-----|---------|-------|-----|
| uF殼號 | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA | D×Lmm | tan δ | mA |
| 1 | 6.3×10.2 | 0.20 | 20 | 6.3×10.2 | 0.24 | 17 | 8×10.2 | 0.24 | 20 |
| 2.2 | 6.3×10.2 | 0.20 | 31 | 8×10.2 | 0.24 | 30 | 10×10.2 | 0.24 | 35 |
| 3.3 | 8×10.2 | 0.20 | 43 | 10×10.2 | 0.24 | 39 | 10×10.2 | 0.24 | 39 |
| 4.7 | 8×10.2 | 0.20 | 52 | 10×10.2 | 0.24 | 56 | 10×12.5 | 0.24 | 59 |
| 6.8 | 10×10.2 | 0.20 | 72 | 12.5×13.5 | 0.24 | 72 | 16×16.5 | 0.24 | 115 |
| 10 | 12.5×13.5 | 0.20 | 110 | 16×16.5 | 0.24 | 140 | 16×16.5 | 0.24 | 140 |
| 15 | 12.5×16 | 0.20 | 150 | 16×21.5 | 0.24 | 170 | 16×21.5 | 0.24 | 170 |
| 22 | 16×16.5 | 0.20 | 220 | 16×21.5 | 0.24 | 230 | 18×21.5 | 0.24 | 230 |
| 33 | 18×16.5 | 0.20 | 270 | | | | | | |
| 47 | 16×21.5 | 0.20 | 330 | | | | | | |
| 56 | 18×21.5 | 0.20 | 350 | | | | | | |
| | 18×21.5 | 0.20 | 400 | | | | | | |

mA額定紋波電流 Rated ripple current(mA, 105°C, 120Hz)

■ 紋波電流補正係數 Multiplier For Ripple Current

● 頻率係數 Frequency coefficient

| 頻率 Frequency | 120Hz | 1kHz | 10kHz | 100kHz |
|----------------|-------|------|-------|--------|
| 係數 Coefficient | 1.00 | 1.60 | 1.80 | 2.00 |

注: 以上所提供的設計及特性參數僅供參考。任何修改不做預先通知, 如在使用上有疑問, 請在採購前與我們聯絡, 以便提供技術上的協助。
 Note: all designs and specifications are for reference only and are subject to change without prior notice, if any doubt about safety for your application, please contact us immediately for technical assistance before purchase.