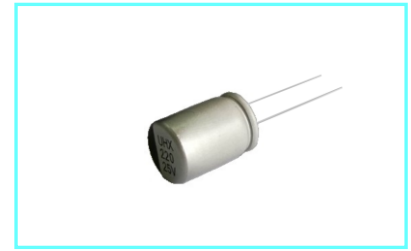


**UHL** シリーズ、リード形 高温 125°C 品  
Series, Radial type, 125°C High Temperature

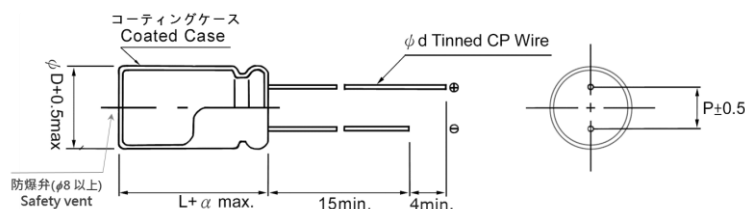
- 電解質をハイブリッド化することにより信頼性の向上、高耐圧化を実現。  
High reliability and high voltage realized by hybrid electrolyte
- 125°C 4,000 時間保証品。 Endurance: 4,000 hours at 125°C
- 定格電圧範囲 Rated Voltage : 16V ~ 100V
- 静電容量範囲 Rated capacitance : 47 ~ 1,500 μF



■ 仕様 SPECIFICATIONS

| 項目 Item  | 性能 Performance Characteristics  |               |      |      |                                   |      |      |      |                 |
|--|---|---------------|------|------|-----------------------------------|------|------|------|-----------------|
| 使用温度範囲<br>Operating Temperature range  | -55 + 125°C   |               |      |      |                                   |      |      |      |                 |
| 定格電圧範囲<br>Rated Voltage Range  | 16V ~ 100V  |               |      |      |                                   |      |      |      |                 |
| 静電容量範囲<br>Capacitance Tolerance  | ± 20% (at 120 Hz / 20°C)  |               |      |      |                                   |      |      |      |                 |
| 漏れ電流<br>Leakage Current  | I ≤ 0.01 CV 以下 (2 分値, 20°C)<br>Not greater than the formula above after 2 minutes voltage applied.  |               |      |      |                                   |      |      |      |                 |
| 損失角の正接 (tanδ)<br>Dissipation Factor (tan δ)                                    | I : 漏れ電流 Leakage current (μA) C : 公称静電容量 Capacitance (μF) V : 定格電圧 Voltage(VDC)   |               |      |      |                                   |      |      |      |                 |
|  | 定格電圧(V) Rated voltage   | 16            | 25   | 35   | 50                                | 63   | 80   | 100  | (20°C · 120 Hz) |
|  | tan δ (Max.)  | 0.16          | 0.14 | 0.12 | 0.10                              | 0.08 | 0.08 | 0.08 |                 |
| 温度特性 (インピーダンス比)<br>Temperature Characteristics<br>(Impedance ratio at 100 KHz) | Z (-25°C) / Z (+20°C) ≤ 1.5<br>Z (-55°C) / Z (+20°C) ≤ 2.0  |               |      |      |                                   |      |      |      |                 |
| 耐久性<br>Endurance   | 125°Cにおいて定格電圧を超えない範囲で規定の定格リップル電流を重畳して4,000時間電圧印加後、20°Cに復帰させ測定を行なったとき、下記を満足すること<br>The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 4,000 hours at 125°C.   |               |      |      |                                   |      |      |      |                 |
|  | 静電容量変化率 Capacitance change  | 初期値の±30%以内    |      |      | ≤ ± 30% of the initial value      |      |      |      |                 |
|  | 損失角の正接 D. F. (Tan δ)  | 初期規格値の 200%以下 |      |      | ≤ 200% of initial specified value |      |      |      |                 |
|  | 等価直列抵抗 ESR  | 初期規格値の 200%以下 |      |      | ≤ 200% of initial specified value |      |      |      |                 |
|  | 漏れ電流 Leakage current  | 初期規格値以下       |      |      | Initial specified value or less   |      |      |      |                 |
| 高温無負荷特性<br>Shelf Life  | 125°Cにおいて電圧を印加せず1,000時間放置後、20°Cに復帰させ試験前処理 (JIS C 5101-4 4.1項) の後、測定を行なったとき、下記を満足すること<br>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to item 4.1 of JIS C 5101-4. |               |      |      |                                   |      |      |      |                 |
|  | 静電容量変化率 Capacitance change  | 初期値の±30%以内    |      |      | ≤ ± 30% of the initial value      |      |      |      |                 |
|  | 損失角の正接 D. F. (Tan δ)  | 初期規格値の 200%以下 |      |      | ≤ 200% of initial specified value |      |      |      |                 |
|  | 等価直列抵抗 ESR  | 初期規格値の 200%以下 |      |      | ≤ 200% of initial specified value |      |      |      |                 |
|  | 漏れ電流 Leakage current  | 初期規格値以下       |      |      | Initial specified value or less   |      |      |      |                 |
| 耐湿負荷特性<br>Bias Humidity Test   | 85°C、85%RH 中で定格電圧を 2,000 時間印加した後、20°Cに復帰させ測定を行なったとき、下記を満足すること<br>The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to the DC rated voltage at 85°C, 85% RH for 2,000 hours.  |               |      |      |                                   |      |      |      |                 |
|  | 静電容量変化率 Capacitance change  | 初期値の±30%以内    |      |      | ≤ ± 30% of the initial value      |      |      |      |                 |
|  | 損失角の正接 D. F. (Tan δ)  | 初期規格値の 200%以下 |      |      | ≤ 200% of initial specified value |      |      |      |                 |
|  | 等価直列抵抗 ESR  | 初期規格値の 200%以下 |      |      | ≤ 200% of initial specified value |      |      |      |                 |
|  | 漏れ電流 Leakage current  | 初期規格値以下       |      |      | Initial specified value or less   |      |      |      |                 |
|  | 外観 Appearance   | 著しい異常がないこと    |      |      | No significant damage             |      |      |      |                 |
| はんだ耐熱性<br>Resistance to Soldering Heat   | リフローはんだ付け後、常温復帰後、下記項目を満足する。<br>The following specifications shall be satisfied when the capacitors are restored to 20°C after the soldering.  |               |      |      |                                   |      |      |      |                 |
|  | 静電容量変化率 Capacitance change  | 初期値の±10%以内    |      |      | ≤ ± 10% of the initial value      |      |      |      |                 |
|  | 損失角の正接 D. F. (Tan δ)  | 初期規格値以下       |      |      | ≤ the initial specified value     |      |      |      |                 |
|  | 漏れ電流 Leakage current  | 初期規格値以下       |      |      | ≤ the initial specified value     |      |      |      |                 |

■ 寸法図 Dimension



Unit: mm

|             | 6.3 | 8   | 10  |
|-------------|-----|-----|-----|
| φD + 0.5max | 6.3 | 8   | 10  |
| φd ± 0.05   | 0.6 | 0.6 | 0.6 |
| P           | 2.5 | 3.5 | 5.0 |
| α (max)     | 1.5 | 1.5 | 1.5 |

■ 品名コード体系 Part Numbering (例 example: 50V 100 μF 8 x 12mm)

|   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| U | H | L | 1 | H | 1 | 2 | 1 | M | 0 | 8 | 1 | 2 |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|

|                      |                       |                     |  |                     |                 |                  |
|----------------------|-----------------------|---------------------|--|---------------------|-----------------|------------------|
| シリーズ名<br>Series Name | 定格電圧<br>Rated Voltage | 静電容量<br>Capacitance | 容量許容差<br>Capacitance<br>Tolerance (±20%) | サイズコード<br>Size code | 包装仕様<br>Package | 個別指定<br>Reserved |
|----------------------|-----------------------|---------------------|--|---------------------|-----------------|------------------|

■ 寸法表 Standard Products Table

| 定格電圧<br>Rated voltage (V.DC) | 静電容量範囲<br>Rated Capacitance (μF) | ケースサイズ<br>Case Size D x L (mm) | tan δ | 等価直列抵抗 ESR<br>mΩ max.<br>20°C/100KHz | 定格リップル電流<br>Rated ripple current<br>mA rms/125°C,100KHz | 品番<br>Part Number |
|------------------------------|----------------------------------|--------------------------------|-------|--------------------------------------|---|-------------------|
| 16<br>(1C)                   | 220                              | 6.3 x 7                        | 0.16  | 27                                   | 1,450   | UHL1C221M0607     |
|                              | 330                              | 6.3 x 11.5                     | 0.16  | 25                                   | 1,600   | UHL1C331M0611     |
|                              | 820                              | 8 x 12                         | 0.16  | 20                                   | 1,850   | UHL1C821M0812     |
|                              | 1500                             | 10 x 12                        | 0.16  | 14                                   | 3,000   | UHL1C152M1012     |
| 25<br>(1E)                   | 100                              | 6.3 x 7                        | 0.14  | 30                                   | 1,400   | UHL1E101M0607     |
|                              | 150                              | 6.3 x 7                        | 0.14  | 30                                   | 1,400   | UHL1E151M0607     |
|                              | 220                              | 6.3 x 11.5                     | 0.14  | 27                                   | 1,650   | UHL1E221M0611     |
|                              | 470                              | 8 x 12                         | 0.14  | 23                                   | 1,900   | UHL1E471M0812     |
|                              | 680                              | 10 x 12                        | 0.14  | 15                                   | 2,700   | UHL1E681M1012     |
| 35<br>(1V)                   | 100                              | 6.3 x 7                        | 0.12  | 35                                   | 1,400   | UHL1V101M0607     |
|                              | 150                              | 6.3 x 11.5                     | 0.12  | 32                                   | 1,650   | UHL1V151M0611     |
|                              | 220                              | 8 x 12                         | 0.12  | 24                                   | 1,800   | UHL1V221M0812     |
|                              | 470                              | 10 x 12                        | 0.12  | 16                                   | 2,600   | UHL1V471M1012     |
| 50<br>(1H)                   | 33                               | 6.3 x 7                        | 0.10  | 40                                   | 1,100   | UHL1H330M0607     |
|                              | 47                               | 6.3 x 11.5                     | 0.10  | 36                                   | 1,250   | UHL1H470M0611     |
|                              | 120                              | 8 x 12                         | 0.10  | 28                                   | 1,400   | UHL1H121M0812     |
|                              | 220                              | 10 x 12                        | 0.10  | 23                                   | 1,800   | UHL1H221M1012     |
| 63<br>(1J)                   | 22                               | 6.3 x 7                        | 0.08  | 80                                   | 900   | UHL1J220M0607     |
|                              | 33                               | 6.3 x 11.5                     | 0.08  | 70                                   | 1,000   | UHL1J330M0611     |
|                              | 100                              | 8 x 12                         | 0.08  | 36                                   | 1,300   | UHL1J101M0812     |
|                              | 150                              | 10 x 12                        | 0.08  | 26                                   | 1,600   | UHL1J151M1012     |
| 80<br>(1K)                   | 47                               | 8 x 12                         | 0.08  | 42                                   | 1,200   | UHL1K470M0812     |
|                              | 82                               | 10 x 12                        | 0.08  | 33                                   | 1,350   | UHL1K820M1012     |
| 100 (2A)                     | 47                               | 10 x 12                        | 0.08  | 60                                   | 1050  | UHL2A470M1012     |

■ 許容リップル電流の周波数係数 Frequency coefficient of allowable ripple current

| 周波数<br>Frequency  | 120 Hz ≤ f < 1 KHz | 1 KHz ≤ f < 10 KHz | 10 KHz ≤ f < 100 KHz | 100 KHz ≤ f ≤ 300 KHz |
|-------------------|--------------------|--------------------|----------------------|-----------------------|
| 係数<br>Coefficient | 0.10               | 0.40               | 0.70                 | 1.00                  |