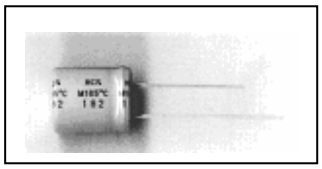
# Richey Capacitor, Inc.

**Aluminum solid electrolytic capacitor with conductive polymer**



# REU Series

## Ultra Low ESR, High Ripple Current.

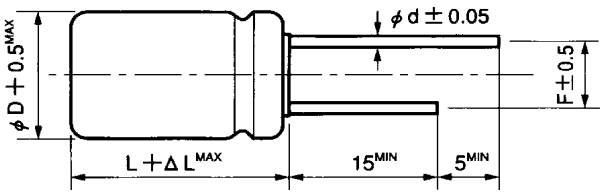
This capacitor is a winding type aluminum electrolytic capacitors that uses a conductive polymer ( Polythiophene ) as electrolyte. It has a ultra low ESR and high permissible ripple current at high frequencies band. Suitable for noise suppressing in smoothing circuits of DC-DC converter or high frequencies circuits.

## ■ Specifications

| Item | Characteristics |
|---|---|
| Operating Temperature Range | -55°C~+105°C |
| Rate Voltage Range | 2.5V~6.3V (DC) |
| Nominal Cap. Range | 560-1500uF (at 20°C 120Hz) |
| Capacitance Tolerance | -20%~+20%(at 20°C 120Hz) |
| Leakage Current | The initial specified value or less (value in characteristics list) |
| Dissipation Factor (Tan δ ) | The initial specified value or less (value in characteristics list) |
| Surge Voltage | Rated voltage x1.15 |
| Temperature Characteristics | Z (-25°C) / Z (+20°C) 1.00-1.25 Stability at 100KHz<br>Z (+105°C)/ Z (+20°C) 0.75-1.00 Stability at 100KHz |
| High Temp. Load Test | 105°C ,2000h, Rate Voltage applied<br>Capacitance change: within ±20% of the initial measured value<br>Tan δ : ≦150% of initial specified value<br>ESR: ≦150% of initial specified value<br>DC Leakage Current: The initial specified value |
| Moisture Resistance | 60°C, 90~95% RH 500H, Rate Voltage applied<br>Capacitance change: within ±20% of the initial measured value<br>Tan δ : ≦150% of initial specified value<br>ESR: ≦150% of initial specified value<br>DC Leakage Current: The initial specified value |
| Surge Voltage Characteristics | The capacitor shall be subjected to 1000 cycles consists of charging at the designated surge voltage for 30s and discharged for approx.5mon 30s.<br>Capacitance change: within ±5% of the initial measured value<br>Tan δ : ≦within initial specified value<br>DC Leakage Current: The initial specified value |

## ■ Dimension

(all dimension in mm)

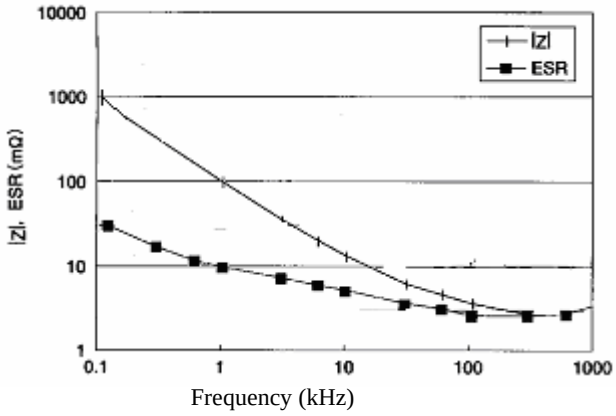



| Φd X L | L | Φd | F |
|---|---|---|---|
| 8 X 8 | 1.0 | 0.6 | 3.5 |

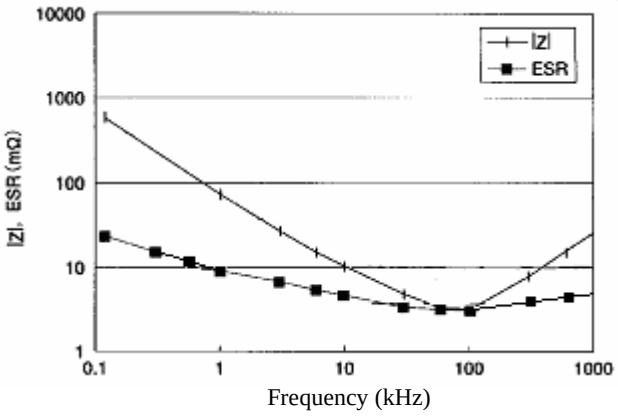
## ■ Characteristics list

| Rate Voltage (VDC) | Nominal capacitance (uF) | Leakage current(uA) | Tan δ at 120Hz | ESR(mΩ) at 100kHz | Ripple(mArms) at 100KHz 105°C | Case size | |
|---|---|---|---|---|---|---|---|
| | | | | | | Φ D | L |
| 2.5 | 560 | 500.0 | 0.10 | 6 | 4400 | 8 | 8 |
| | 820 | 500.0 | 0.10 | 6 | 5600 | 8 | 8 |
| | 1000 | 500.0 | 0.10 | 6 | 5600 | 8 | 8 |
| | 1500 | 750.0 | 0.10 | 6 | 5600 | 8 | 8 |
| 4.0 | 560 | 500.0 | 0.08 | 6 | 5600 | 8 | 8 |
| | 820 | 656.0 | 0.08 | 6 | 5600 | 8 | 8 |
| 6.3 | 680 | 856.8 | 0.08 | 6 | 5600 | 8 | 8 |

## ■ ESR Typical data




Frequency characteristics of Impedance, ESR (2.5V-560 uF)




Frequency characteristics of Impedance, ESR (2.5V-820 uF)