

# TYPE TPLH 3.0V THREADED ELECTRIC DOUBLE LAYER ULTRACAPACITOR

### FEATURES

- Extremely low ESR
- 10 year service life
- RoHS/REACH compliant
- Halogen Free
- UL recognized

#### **APPLICATIONS**

- Peak power handling
- Industrial automation
- UPS/voltage hold up





#### **GENERAL SPECIFICATIONS**

| Item   | Performance  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|
| Operating temperature  | -40°C to +65°C   |  |  |  |  |  |  |  |
| Storage temperature  | -40°C to +70°C   |  |  |  |  |  |  |  |
| Capacitance  | 2,000F   |  |  |  |  |  |  |  |
| Rated voltage  | 3 VDC  |  |  |  |  |  |  |  |
| Surge voltage  | 3.2 VDC  |  |  |  |  |  |  |  |
| Temperature characteristics  | Capacitance change: Within $\pm 5\%$ of initial measured value at $+25^{\circ}$ C (-40°C to +65°C)<br>Internal resistance: Within $\pm 50\%$ of initial measured value at $+25^{\circ}$ C (at -40°C) |  |  |  |  |  |  |  |
| Endurance<br>(At rated voltage & max. operating<br>temp)                     | After 1500 hours:<br>Capacitance change: Within ±20% of initial rated value<br>Internal resistance: Within 2 times of initial specified value  |  |  |  |  |  |  |  |
| Projected Load life<br>(At rated voltage & 25°C)                             | 10 years:<br>Capacitance change: Within ±20% of initial rated value<br>Internal resistance: Within 2 times of initial specified value  |  |  |  |  |  |  |  |
| Projected cycle life<br>(From rated voltage to 1/2 rated<br>voltage at 25°C) | 1,000,000 cycles between Vr and ½ Vr:<br>Capacitance change: Within ±20% of initial rated value<br>Internal resistance: Within 2 times of initial specified value                                    |  |  |  |  |  |  |  |
| Shelf life   | After 4 years at 25°C without load, the capacitor shall meet the specified endurance limits.   |  |  |  |  |  |  |  |



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#### DIMENSIONS



#### STANDARD PRODUCTS

| Part Number           |      | GMV  | ESR<br>DC<br>(mΩ) | ESR<br>AC<br>(mΩ) | Leakage<br>Current<br>(mA)<br>(72 hrs @<br>25C) | Dimensions (mm) |      |     | Rated<br>Current | Weight/Unit |
|-----------------------|------|------|-------------------|-------------------|---|-----------------|------|-----|------------------|-------------|
|                       |      | (F)* |                   |                   |   | D1              | D2   | L   | (A)              | (grams)     |
| TPLH-3R0/2000SL60X102 | 2000 | 2000 | 0.3               | 0.21              | 4   | 60              | 60.7 | 102 | 1500             | 390         |

\*NOTE: GMV = Guaranteed Minimum Value.