Tadiran High Power Lithium Organic Cell
Model TLM-1530HP

1. Scope

This data sheet describes the mechanical design and performance of Tadiran high power lithium organic cell model TLM-1530HP.

2. Characteristics

2.1. Physical

2.1.1. Length: 27.4 ±1 mm.
2.1.2. Diameter: 14.8 ±0.3 mm.
2.1.3. Weight: 11 gr. max.

2.2. Electrical

2.2.1. Open Circuit Voltage (for batteries stored at RT for 1 year or less) 3.95 to 4.07 V
2.2.2. Closed Circuit Voltage (at 0.1 sec) at 0.5 A load 3.83 V minimum
2.2.3. Discharge

| Discharge capacity at 20 mA @ RT to 2.8 V | 240 mAh |
| Discharge capacity at 225 mA @ RT to 2.8 V | 225 mAh |

Maximum discharge current
- Continuous to 2.8 V: 2.5 A
- 1 second pulse to 3 V: 6.5 A

2.3. Operating Temperature Range: -40 °C to 85 °C

2.4. Accumulated Capacity Loss:

<table>
<thead>
<tr>
<th>Storage Temperature</th>
<th>22 °C</th>
<th>55 °C</th>
<th>72 °C</th>
<th>85 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Time [Y]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3 %</td>
<td>6 %</td>
<td>10 %</td>
<td>TBD</td>
</tr>
<tr>
<td>5</td>
<td>7 %</td>
<td>22 %</td>
<td>40 %</td>
<td>N/A</td>
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<td>10</td>
<td>11 %</td>
<td>32 %</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>15</td>
<td>15 %</td>
<td>42 %</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>20</td>
<td>18 %</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* When tested at RT under 20 mA to 2.8 V

2.5. Cell impedance: Less than 175 mOhm @ 1kHz at room temperature.
2.6. Performance Data:

Discharge capability at RT

Pulse capability at RT
Discharge capability @ 0.5A at several temperatures

* Performance at 85°C is close to that at 72°C

Pulse capability @ 0.5A at several temperatures

* Performance at 85°C is close to that at 72°C
2.7. End of life indication:
   OCV measurements can provide a good estimation for the remaining capacity of the cell as shown below.

   **Capacity vs. OCV**

2.8. Safety tests:

   The cell has successfully passed the following safety tests:
   
   - Short circuit at RT and at 55°C
   - Oven at 150°C
   - Impact
   - Nail penetration
   - Over charge and over discharge