1. **Scope**

This specification applies to the 2/3AA size Lithium Ion Rechargeable battery supplied by Tadiran Batteries Ltd.

*Notice: Charging circuit and application load profile have to be approved by Tadiran prior to the use of this cell.*

2. **Characteristics**

2.1. **Physical**
- Length: 27.4 mm Max.
- Diameter: 15.1 mm Max
- Weight: 9.9 gr. Max.

2.2. **Electrical / Charge**
- Charge Voltage: 4.1 V
- Charge Current: 50 mA Max.
- Charge Method: CCCV (Constant Current/Constant Voltage)
- End of Charge: 10 mA Max. per cell
- Charge Temp. Range: -20 to +50 °C
  Charge temperature can be extended to -40 ÷ +85 °C provided that the max. charge current is limited to 10 mA.

2.3. **Electrical / Discharge**
- Nominal Current: 125 mA
- End of Discharge: 2.5 V @ Room Temperature
- Discharge Temp. Range: -40 to +85 °C

2.3.4. **Performance Characteristics:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Capacity</td>
<td>150 [mAh]</td>
<td>Discharge at 50 mA</td>
</tr>
<tr>
<td></td>
<td>140 [mAh]</td>
<td>Discharge at 500 mA</td>
</tr>
<tr>
<td>Charge Discharge Cycles</td>
<td>140 [mAh]</td>
<td>After 100 cycles Discharge at 125 mA</td>
</tr>
<tr>
<td>Temperature</td>
<td>130 [mAh]</td>
<td>Discharge at -20 °C at 125 mA</td>
</tr>
<tr>
<td></td>
<td>150 [mAh]</td>
<td>Discharge at 60 °C at 125 mA</td>
</tr>
<tr>
<td>Charge Retention</td>
<td>130 [mAh]</td>
<td>After 5 years at RT,</td>
</tr>
<tr>
<td>(Reversible)</td>
<td></td>
<td>Discharge at 125 mA</td>
</tr>
<tr>
<td>Impedance</td>
<td>Less than 175 mohm</td>
<td>Impedance at 1 KHz</td>
</tr>
</tbody>
</table>

RevB, Dec, 2013 (ECN 6102162)
Discharge curves at Room Temperature

Discharge Curves at Several Temperatures, @ 1 A
Voltage Curves @ 350 mA, 10 sec pulse

Voltage Curves @ 600 mA, 10 sec pulse
2.4. Cell / Battery Protection (to be applied by the user)

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over charge protection</td>
<td>Cell voltage should not be higher than 4.2 V</td>
</tr>
<tr>
<td>Over discharge protection</td>
<td>Cell voltage should not be lower than 2.4 V</td>
</tr>
</tbody>
</table>

2.5. Safety Characteristics

The cells successfully passed the following safety tests:
- Short circuit at RT, 55 °C and 85 °C.
- Temperature test up to 170 °C.
- Crush.
- Impact.
- Nail penetration.
- Over charge up to 250 mA, 12 V.
- Over discharge (300%) up to 1 A.

2.6. Battery pack assembly and usage considerations

- For 2 cells or more in series, voltage shall be monitored on each cell.
- For more than 2 cells in parallel, maximum charge current shall be limited to 125 mA for the whole pack.