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Document Number : 0402-70  
 Revision : A9  
 Total Pages : 5  
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 Date : 8 October, 2018

**SENER** Brand Power Product

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Document Type : Specification  
 Product Type : Lithium Manganese Dioxide (LiMnO<sub>2</sub>) Cylindrical Battery  
 Ordering Code : SCR17335A  
 Part Number : CR123A  
 Cell UL Number : MH61795

A1 - New issue created by Leo, Sin on 16 Feb., 2004	A5 - Updated to hermetically construction by Leo, Sin on 30 Apr., 2009	A9 - Updated section 4 and 7 by Loki, Lo on 8 Oct., 2018
A2 - UL number added by Leo, Sin on 30 Aug., 2005	A6 - Updated format & layout by Holmes, Poon on 10 Nov., 2011	
A3 - Updated specification by Leo, Sin on 16 Nov., 2005	A7 - Updated section 4 ~ 6 by Loki, Lo on 4 Jan., 2013	
A4 - Updated to semi-sealed construction by Leo, Sin on 1 Nov., 2007	A8 - Updated section 4 and 6 by Ting Lok, Ngan on 14 Nov., 2013	

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## 1. Purpose and Scope

This document contains both general requirements, qualification requirements, and those specific electrical, mechanical requirements for this part.

## 2. Description

Ø17 x 34.5 mm Lithium Manganese Dioxide (LiMnO<sub>2</sub>) cylindrical battery, RoHS compliant.

## 3. Application

Computers and Peripherals, Portable Equipment, etc.

## 4. Component Requirement

### 4.1. General Requirement

4.1.1.	Cell Size	: Ø17 x 34.5 mm
4.1.2.	Weight	: Approx. 16.3g
4.1.3.	Operating Temperature	: -40°C to +60°C
4.1.4.	Storage Temperature	: -20°C to +40°C

### 4.2. Electrical Requirement

4.2.1.	Nominal Voltage	: 3V
4.2.2.	Nominal Capacity	: 1700mAh
4.2.3.	Standard Discharge current	: 20mA
4.2.4.	Maximum Continuous Discharge Current	: 1500mA

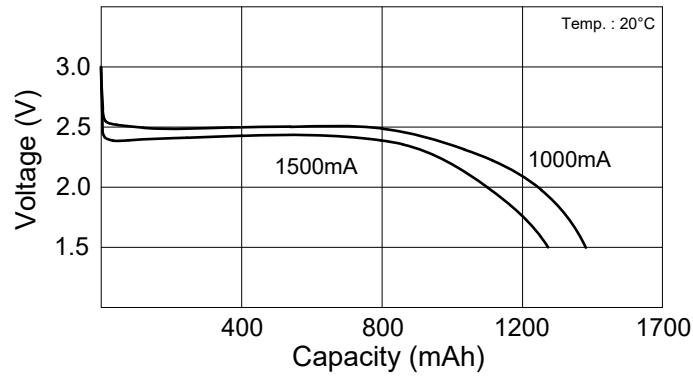
### 4.3. Standard Characteristics

#### 4.3.1. Discharge Characteristics



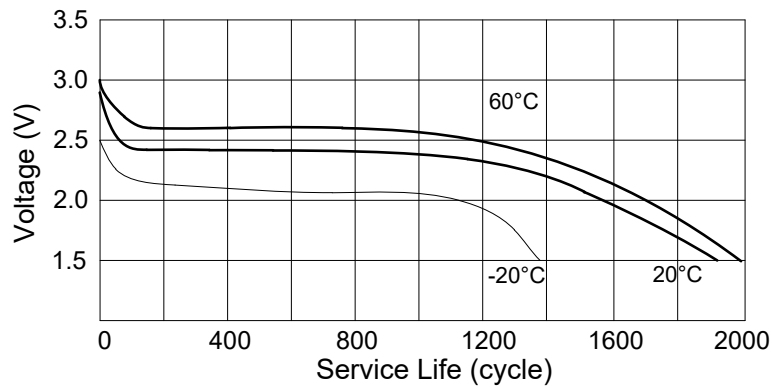
**Figure 1. Discharge Characteristics**

**4.3.2. High Drain Discharge Characteristics**



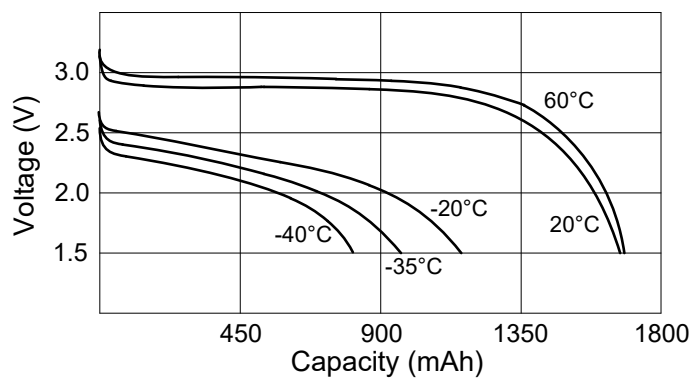
**Figure 2. High Drain Discharge Characteristics**

**4.3.3. Pulse Discharge Characteristics**



**Figure 3. Pules Discharge Characteristics**

**4.3.4. Temperature Characteristics (20mA)**



**Figure 4. Temperature Characteristics (20mA)**

**5. Test and Measurement**

- 5.1. Outer Dimensions** : Samples are measured by caliper with tolerance <0.25%.
- 5.2. Weight** : Samples are measured by balance with sensitivity > 100mg.
- 5.3. Appearance** : No deformation or tarnish should be found by visual inspection.
- 5.4. Open Circuit Voltage** : Samples are measured by voltmeter with internal impedance >10MΩ and tolerance <0.25%.
- 5.5. Operating Duration** : Operating duration is counted from nominal voltage to specific cut-off voltage by standard discharge current.
- 5.6. Battery Impedance** : Apply 1KHz, 0.1mA sine wave to samples and measure it's impedance value.
- 5.7. Vibration Resistance** : Secure samples. Vibrated 1000rpm with 2mm peak amplitude in 3 directions (x, y and z). The test duration is 30 minutes per plane.
- 5.8. Leakage Resistance** : Perform heat cycle test according to MIL-STD-202E-106D standard. No leakage should be found after 10 cycles test.
- 5.9. PTC Device Performance** : Applying 1KHz, 0.1mA sine wave to samples and measure it's PTC device performance.

**6. Caution**

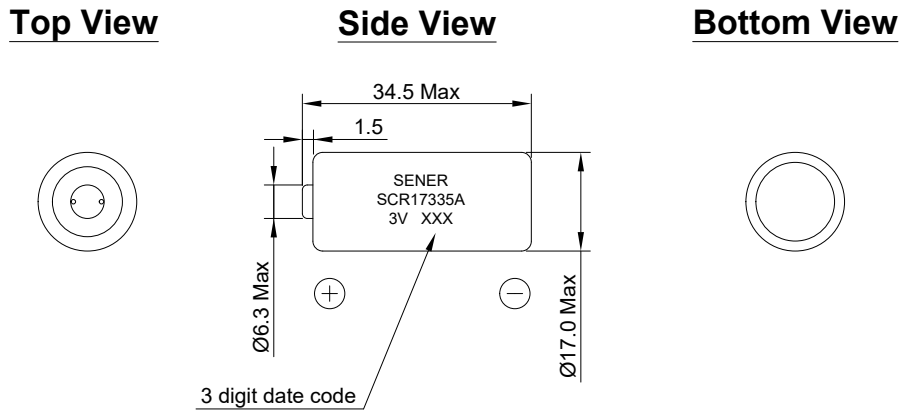
- 6.1.** Do not short or charge the battery.
- 6.2.** Over-discharge, crushing, incinerating and disassembling the battery are prohibited.
- 6.3.** Do not heat the battery beyond the permitted temperature range.
- 6.4.** Remove the battery when the cut-off voltage is reached.
- 6.5.** Bury the used battery deeply underground or store the used battery in a deep water tank.

**7. Mechanical Layout**

Unit : mm

Tolerance : Linear    XX.X    = ±0.3  
                               XX.XX   = ±0.05  
                               Angular   = ±0.25°

(unless otherwise specified)



**Figure 5. SCR17335A Mechanical Layout**