**SCREENING REPORT** Page: 1

**Test Number:** 14891D00  **Report Date:** 2021-07-12

**Battery Name:** Panasonic CR2032

**Chemistry:** Li/MnO₂

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**Request Number:** 210609-2

**Task Number:** 12827

**Lot Number:** 13031

**Form Factor:** Coin

**Purpose:** Screening

**Project Engineer:** CJH

Criteria:Screening Min.

**OCV (Volt):** 3.2

**CCV (Volt):** 2.7

**Drain Time (Sec):** 3

**Current(mA):** 100

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**Battery Size (mm):** 3.2(H) X 20.0(D)

**Discharge Temperature (°C):** 24

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**Number of Batteries Tested :** 36

**Number of Batteries Failed(\*):** 2

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**Date of Manufacture:** 2019-06-15

**Date of Receipt:** 2021-05-13

**Date Started:** 07/07/2021

**Date Completed:** 07/01/2021

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Prepared By: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_ Reviewed By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

Reviewed By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

**Test Number:** 14891D00

Note(s):  
  
1. Report Date:  
  
2. Test Responsibility:  
   
 a. Data file preparation:  
 b. Technical review:  
 c. Final review:  
  
3. The outlier is identified by use 1.5\*Interquartile Range rule (IQR). Q1, Q3 = [25% percentile, 75% percentile], the minimum for outliner = Q1 – 1.5\* IQR, the maximum for outlier = Q3 +1.5\* IQR.

**SCREENING REPORT**

**Test Number:** 14891D00  **Date:**2021-07-12

**Sample Name:** Panasonic CR2032

**Chemistry:** Li/MnO₂

**Voltage Statistic Table**

All samples OCV CCV

**Maximum:** **3.253** **3.189**

**Minimum:** **1.677** **1.559**

**Median:** **3.249** **3.181**

**Mean (M):** **3.165** **3.094**

**Stander Deviation (SD):** **0.35356** **0.3548**

**Total Samples:** **36** **36**

**Total Passing Criterion:** **34** **34**

**Total Failing Criterion:** **2** **2**

**95%** **confidence Interval**  3.045 / 3.284 2.974 / 3.214

**Outlier Min/Max** 3.241 / 3.257 3.165 / 3.194

**Total Outlier:** 2 6

**OCV > or =** 3.200**V**

**CCV > or =** 2.700V **@** 100 mA for 3 Seconds.

**CUMULATIVE TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| **All Sample OCV** | | **All Sample CCV** | |
| Voltage Range | Samples | Voltage Range | Samples |
| 3.253-3.055 | 34 | 3.189-2.984 | 34 |
| 3.055-2.857 | 0 | 2.984-2.779 | 0 |
| 2.857-2.659 | 0 | 2.779-2.574 | 0 |
| 2.659-2.461 | 0 | 2.574-2.369 | 0 |
| 2.461-2.263 | 0 | 2.369-2.164 | 0 |
| 2.263-2.065 | 0 | 2.164-1.959 | 0 |
| 2.065-1.867 | 0 | 1.959-1.754 | 0 |
| 1.867-1.669 | 2 | 1.754-1.549 | 2 |

**SCREENING REPORT**

**Test Number:** 14891D00 **Raw Data** **Chemistry:** Li/MnO₂

**Sample Name:** Panasonic CR2032 **Load:** 100mV

**Sort Order:** Bar Code Number **Load Time:** 3Sec(S)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Bar Code Number | Manufacturer  Number | Manufacture Date | Screening  OCV | Screening  CCV |  |  | Inspection |
| 471260 |  | 2019-06-15 | 3.251 | 3.183 |  |  | OK |
| 471261 |  | 2019-06-15 | 3.252 | 3.150 \* |  |  | OK |
| 471263 |  | 2019-06-15 | 3.249 | 3.177 |  |  | OK |
| 471264 |  | 2019-06-15 | 3.246 | 3.174 |  |  | OK |
| 471265 |  | 2019-06-15 | 3.247 | 3.157 \* |  |  | OK |
| 471266 |  | 2019-06-15 | 3.251 | 3.180 |  |  | OK |
| 471267 |  | 2019-06-15 | 3.249 | 3.184 |  |  | OK |
| 471268 |  | 2019-06-15 | 3.247 | 3.176 |  |  | OK |
| 471269 |  | 2019-06-15 | 3.250 | 3.181 |  |  | OK |
| 471270 |  | 2019-06-15 | 3.250 | 3.185 |  |  | OK |
| 471272 |  | 2019-06-15 | 3.246 | 3.160 \* |  |  | OK |
| 471273 |  | 2019-06-15 | 3.249 | 3.179 |  |  | OK |
| 471274 |  | 2019-06-15 | 3.253 | 3.187 |  |  | OK |
| 471275 |  | 2019-06-15 | 3.253 | 3.187 |  |  | OK |
| 471276 |  | 2019-06-15 | 3.250 | 3.177 |  |  | OK |
| 471277 |  | 2019-06-15 | 3.251 | 3.183 |  |  | OK |
| 471279 |  | 2019-06-15 | 3.248 | 3.182 |  |  | OK |
| 471280 |  | 2019-06-15 | 3.249 | 3.185 |  |  | OK |
| 471281 |  | 2019-06-15 | 3.250 | 3.183 |  |  | OK |
| 471282 |  | 2019-06-15 | 3.247 | 3.180 |  |  | OK |
| 471283 |  | 2019-06-15 | 3.245 | 3.177 |  |  | OK |
| 471284 |  | 2019-06-15 | 3.247 | 3.172 |  |  | OK |
| 471285 |  | 2019-06-15 | 3.251 | 3.183 |  |  | OK |
| 471286 |  | 2019-06-15 | 3.246 | 3.178 |  |  | OK |
| 471287 |  | 2019-06-15 | 3.249 | 3.180 |  |  | OK |
| 471288 |  | 2019-06-15 | 3.247 | 3.182 |  |  | OK |
| 471289 |  | 2019-06-15 | 3.250 | 3.163 \* |  |  | OK |
| 471290 |  | 2019-06-15 | 3.246 | 3.181 |  |  | OK |
| 471291 |  | 2019-06-15 | 3.249 | 3.183 |  |  | OK |
| 471357 |  | 2019-06-15 | 3.248 | 3.176 |  |  | OK |
| 471360 |  | 2019-06-15 | 3.251 | 3.188 |  |  | OK |
| 471361 |  | 2019-06-15 | 3.253 | 3.189 |  |  | OK |
| 471362 |  | 2019-06-15 | 3.251 | 3.186 |  |  | OK |
| 471363 |  | 2019-06-15 | 3.245 | 3.185 |  |  | OK |
| 12345 |  | 2019-06-15 | 1.677 ! | 1.559 ! |  |  | OK |
| 123456 |  | 2019-06-15 | 1.779 ! | 1.751 ! |  |  | OK |

Key: ^ for Tab Tolerance Fail(T), ! for Criteria Fall(F), \* for outlier(OH for High)(OL for Low)