# renata hatteries

FICHA DE PRODUCTO







3V Lithium Battery Swiss Made

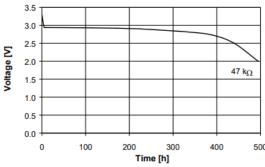
# **Technical Data Sheet**

## **Specifications**

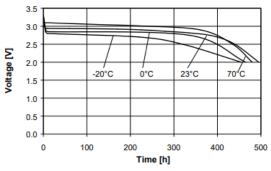
**Chemical System** Li / MnO<sub>2</sub> Nominal Voltage Rated Capacity 30 mAh 0.05 mA Standard Discharge Current Max. Cont. Discharge Current\*\* 0.4 mA Average Weight  $\sim 0.6 g$ Operating Temperature\* -40 - +85 °C Self Discharge at 23°C < 1% / year

# **Performance**

## Discharge performance at 23°C

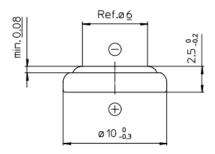


#### Temperature performance Load 47kΩ

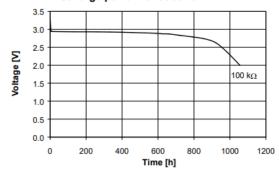


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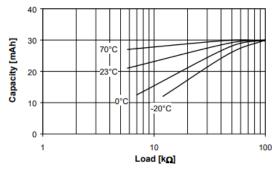
(According to IEC 60086)



#### Discharge performance at 23°C



#### Cell capacity at various loads



<sup>\*</sup>In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy. \*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

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## **CR1216 MFR**

3V Lithium Battery OEM

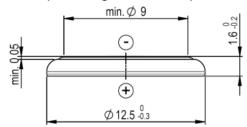
## **Technical Data Sheet**

## **Specifications**

**Chemical System** Li / MnO<sub>2</sub> Nominal Voltage 3 V **Nominal Capacity** 25 mAh Standard Discharge Current 0.1 mA Max. Cont. Discharge Current \*\* 1 mA Average Weight  $\sim 0.7 g$ Operating Temperature\* -30 - +85 °C Self Discharge at 23°C ≈ 1% / year

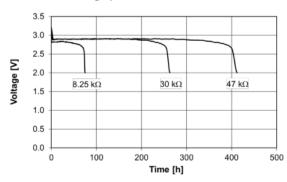
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(According to IEC 60086)

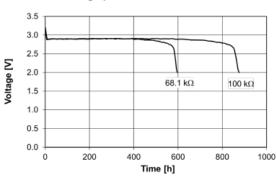


#### **Performance**

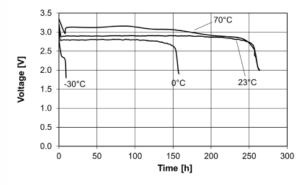
#### Discharge performance at 23°C



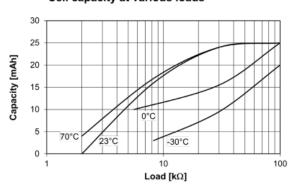
#### Discharge performance at 23°C



#### Temperature performance Load 30k $\Omega$



#### Cell capacity at various loads



<sup>\*</sup>In applications where the battery is exposed to temperatures above 60 °C, please contact Renata for consultancy.

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<sup>\*\*</sup>Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.



## **CR1220 MFR**

3V Lithium Battery OEM

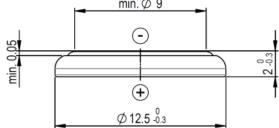
# **Technical Data Sheet**

## **Specifications**

**Chemical System** Li / MnO<sub>2</sub> 3 V Nominal Voltage 35 mAh **Nominal Capacity** Standard Discharge Current 0.1 mA Max. Cont. Discharge Current\*\* 1 mA Average Weight  $\sim 0.9 g$ Operating Temperature\* -30 - +85 °C Self Discharge at 23°C ≈ 1% / year

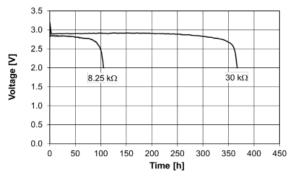
#### **Dimensions**

(According to IEC 60086) min. Ø 9 (-)

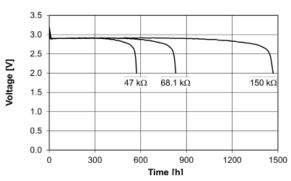


#### **Performance**

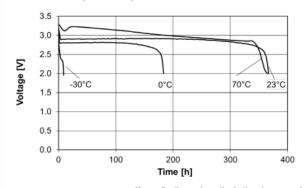
#### Discharge performance at 23°C



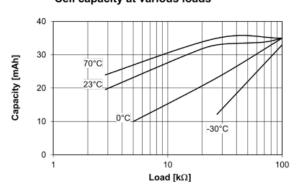
#### Discharge performance at 23°C



#### Temperature performance Load 30k $\Omega$



Cell capacity at various loads



<sup>\*</sup>In applications where the battery is exposed to temperatures above 60 °C, please contact Renata for consultancy. \*\*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

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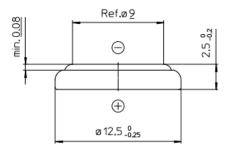
# Technical Data Sheet

## **Specifications**

Chemical System Li / MnO<sub>2</sub> Nominal Voltage 3 V Rated Capacity 48 mAh Standard Discharge Current 0.1 mA Max. Cont. Discharge Current\*\* 1.0 mA Average Weight  $\sim 0.9 g$ Operating Temperature\* -40 - +85 °C Self Discharge at 23°C < 1% / year

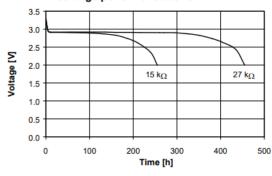
## **Dimensions**

(According to IEC 60086)

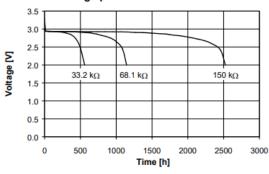


#### **Performance**

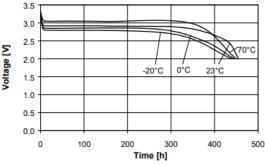
#### Discharge performance at 23°C



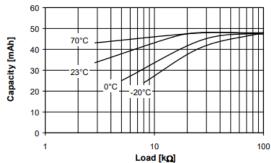
#### Discharge performance at 23°C



#### Temperature performance Load 27kΩ



## Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy.

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<sup>\*\*</sup>Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.



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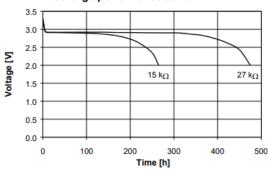
# Technical Data Sheet

## **Specifications**

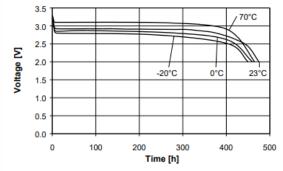
Chemical System Li / MnO<sub>2</sub> 3 V Nominal Voltage Rated Capacity 50 mAh Standard Discharge Current 0.1 mA Max. Cont. Discharge Current\*\* 1.0 mA Average Weight ~ 1.1 g Operating Temperature\* -40 - +85 °C Self Discharge at 23°C < 1% / year

# Performance

#### Discharge performance at 23°C

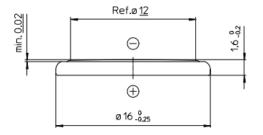


#### Temperature performance Load 27kΩ

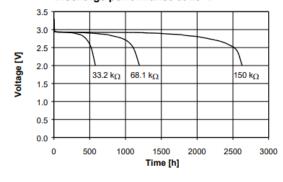


## **Dimensions**

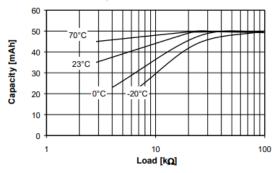
(According to IEC 60086)



#### Discharge performance at 23°C



#### Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy. \*\*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

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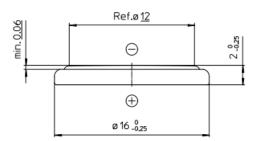
# **Technical Data Sheet**

## **Specifications**

**Chemical System** Li / MnO<sub>2</sub> 3 V Nominal Voltage Rated Capacity 68 mAh Standard Discharge Current 0.1 mA Max. Cont. Discharge Current\*\* 1.0 mA ~ 1.2 g Average Weight -40 - +85 °C Operating Temperature\* Self Discharge at 23°C < 1% / year

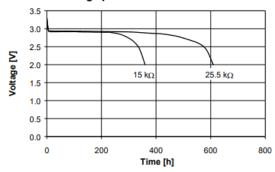
#### **Dimensions**

(According to IEC 60086)

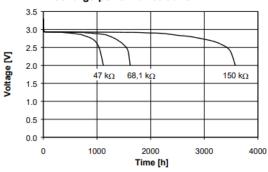


#### **Performance**

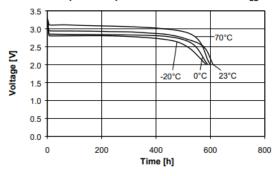
#### Discharge performance at 23°C



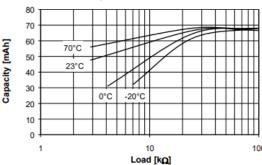
#### Discharge performance at 23°C



#### Temperature performance Load 25.5kΩ



#### Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy. \*\*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

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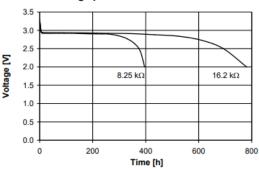
## **Technical Data Sheet**

## **Specifications**

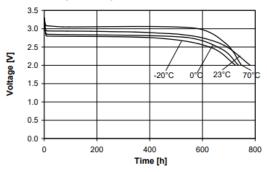
**Chemical System** Li / MnO<sub>2</sub> 3 V Nominal Voltage Rated Capacity 137 mAh Standard Discharge Current 0.2 mA Max. Cont. Discharge Current\*\* 1.5 mA Average Weight ~ 1.8 g -40 - +85 °C Operating Temperature\* Self Discharge at 23°C < 1% / year

## **Performance**

#### Discharge performance at 23°C

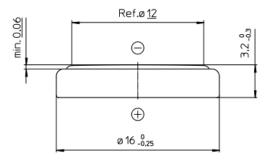


#### Temperature performance Load 16.2kΩ

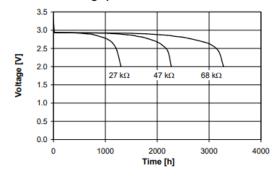


#### **Dimensions**

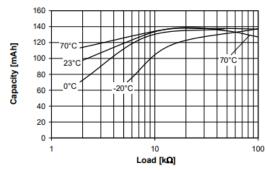
(According to IEC 60086)



#### Discharge performance at 23°C



#### Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy. \*\*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

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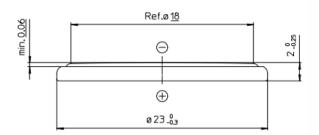
## **Technical Data Sheet**

## **Specifications**

Chemical System Li / MnO<sub>2</sub> Nominal Voltage 3 V 150 mAh Rated Capacity Standard Discharge Current 0.2 mA Max. Cont. Discharge Current\*\* 3.0 mA Average Weight  $\sim 2.7 \, g$ -40 - +85 °C Operating Temperature\* Self Discharge at 23°C < 1% / year

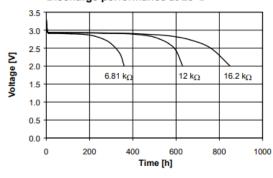
#### **Dimensions**

(According to IEC 60086)

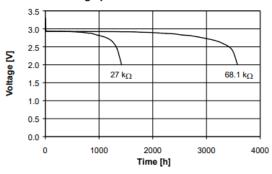


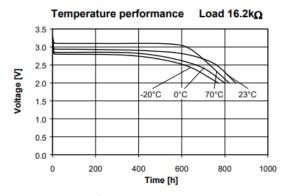
#### **Performance**

#### Discharge performance at 23°C

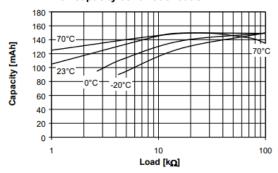


#### Discharge performance at 23°C





#### Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy.

\*\* The maximum current is determined for a yield of 70% of the nominal capacity with a cut-off voltage of 2.0V, at 23 °C.

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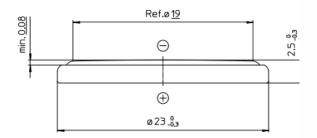
## **Technical Data Sheet**

## **Specifications**

Chemical System Li / MnO<sub>2</sub> Nominal Voltage 3 V Rated Capacity 190 mAh Standard Discharge Current 0.3 mA Max. Cont. Discharge Current\*\* 3.0 mA Average Weight ~ 3.0 g Operating Temperature\* -40 - +85 °C Self Discharge at 23°C < 1% / year

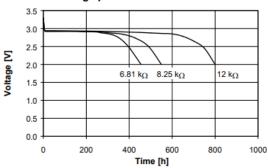
#### **Dimensions**

(According to IEC 60086)

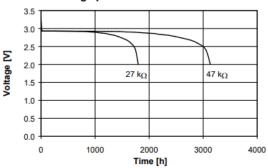


#### **Performance**

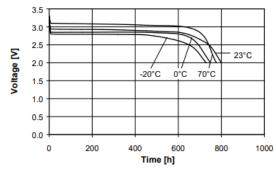
#### Discharge performance at 23°C



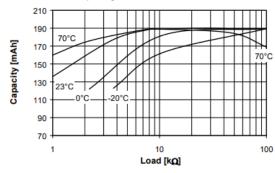
#### Discharge performance at 23°C



#### Temperature performance Load 12kΩ



#### Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy \*\* The maximum current is determined for a yield of 70% of the nominal capacity with a cut-off voltage of 2.0V, at 23°C

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3V Lithium Battery OEM Swiss Made

# Technical Data Sheet

## **Specifications**

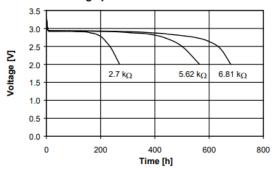
Chemical System Li / MnO<sub>2</sub> 3 V Nominal Voltage Rated Capacity 285 mAh Standard Discharge Current 0.5 mA Max. Cont. Discharge Current\*\* 4.0 mA Average Weight ~ 4.1 g -40 - +85 °C Operating Temperature\*

< 1% / year

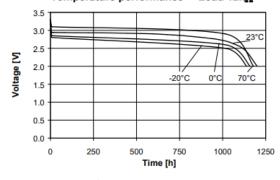
#### Performance

Self Discharge at 23°C

#### Discharge performance at 23°C

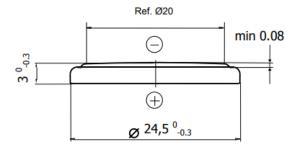


#### Temperature performance Load 12kΩ

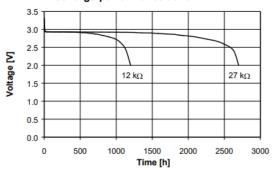


#### **Dimensions**

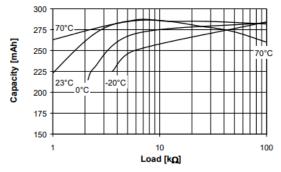
(According to IEC 60086)



#### Discharge performance at 23°C



#### Cell capacity at various loads



\*In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy.

\*\* The maximum current is determined for a yield of 70% of the nominal capacity with a cut-off voltage of 2.0V, at 23 °C.

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## CR2450N

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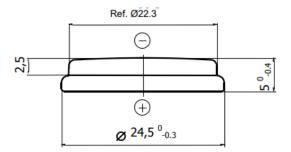
# **Technical Data Sheet**

## **Specifications**

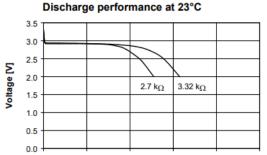
Chemical System Li / MnO<sub>2</sub> Nominal Voltage 3 V Rated Capacity 540 mAh Standard Discharge Current 0,8 mA Max. Cont. Discharge Current\*\* 3.0 mA Average Weight  $\sim 5.9 g$ Temperature Range -40 - +85 °C Self Discharge at 23°C < 1% / year

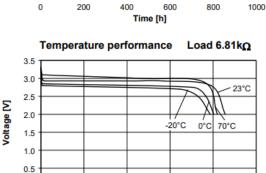
#### **Dimensions**

(According to IEC 60086)



#### **Performance**



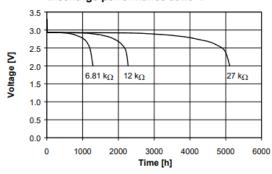


600

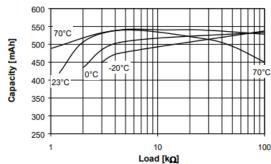
900

Time [h]

#### Discharge performance at 23°C



#### Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy.

\*\* The maximum current is determined for a yield of 70% of the nominal capacity with a cut-off voltage of 2.0V, at 23 °C.

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300



## **CR2477N**

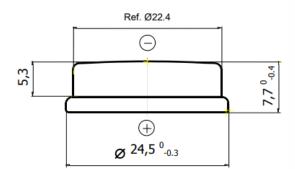
3V Lithium Battery Swiss Made

## **Technical Data Sheet**

## **Specifications**

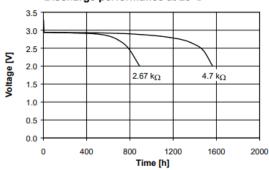
**Chemical System** Li / MnO<sub>2</sub> Nominal Voltage 3 V 950 mAh Rated Capacity Standard Discharge Current 1.0 mA Max. Cont. Discharge Current\*\* 2.5 mA Average Weight ~ 8.3 a -40 - +85 °C Operating Temperature\* Self Discharge at 23°C < 1% / year

## **Dimensions**

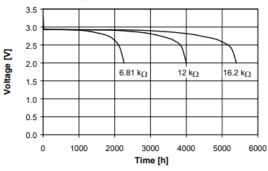


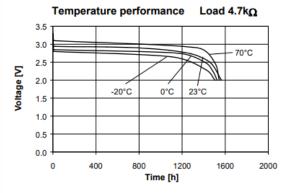
#### **Performance**

#### Discharge performance at 23°C

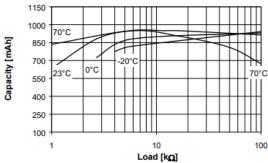


#### Discharge performance at 23°C





## Cell capacity at various loads



In applications where the battery is exposed to temperatures above 70 °C, please contact Renata for consultancy. \*\* The maximum current is determined for a yield of 70% of the nominal capacity with a cut-off voltage of 2.0V, at 23°C.

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## **CR2016 MFR**

3V Lithium Battery

## **Technical Data Sheet**

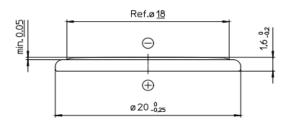
## **Specifications**

Chemical System Li / MnO<sub>2</sub> Nominal Voltage 3 V Rated Capacity 90 mAh Standard Discharge Current 0.2 mA Max. Cont. Discharge Current\*\* 3.0 mA Average Weight  $\sim 1.7 \, g$ Temperature Range -30 - +85 °C \*

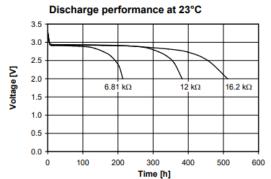
Self Discharge at 23°C < 1% / year

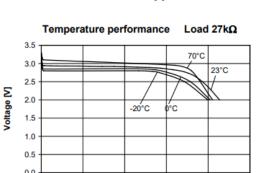
#### **Dimensions**

(According to IEC 60086)



#### Performance





#### Discharge performance at 23°C 3.5 3.0 2.5 Voltage [V] 2.0 27 kΩ 68.1 kΩ 1.5 1.0 0.5 0.0

1000

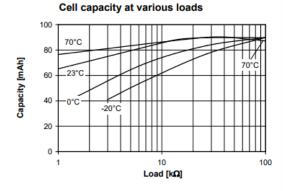
1500

Time [h]

2000

2500

500



In applications where the battery is exposed to temperatures above 60 °C, please contact Renata for consultancy. \*\*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

1000

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## **CR2025 MFR**

3V Lithium Battery

## **Technical Data Sheet**

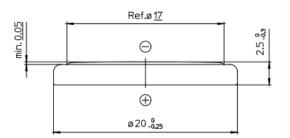
## **Specifications**

**Chemical System** Li / MnO<sub>2</sub> Nominal Voltage 3 V Rated Capacity 165 mAh Standard Discharge Current 0.3 mA Max. Cont. Discharge Current\*\* 3.0 mA Average Weight  $\sim 2.5 g$ 

Temperature Range -30 - +85 °C \* Self Discharge at 23°C < 1% / year

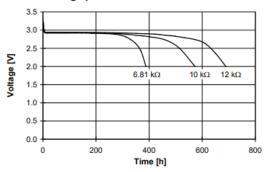
## **Dimensions**

(According to IEC 60086)

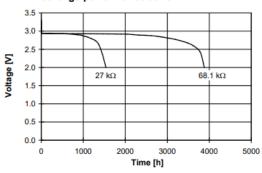


#### Performance

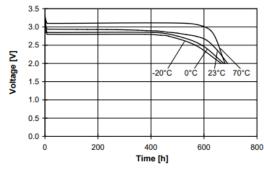
#### Discharge performance at 23°C



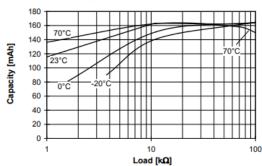
#### Discharge performance at 23°C



#### Temperature performance Load 12kΩ



#### Cell capacity at various loads



In applications where the battery is exposed to temperatures above 60 °C, please contact Renata for consultancy. \*\*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

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## **CR2032 MFR**

3V Lithium Battery

# **Technical Data Sheet**

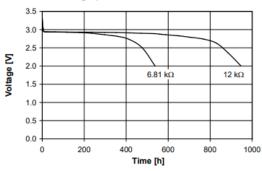
## **Specifications**

**Chemical System** Li / MnO<sub>2</sub> 3 V Nominal Voltage **Rated Capacity** 225 mAh Standard Discharge Current 0.4 mA Max. Cont. Discharge Current\*\* 3.0 mA Average Weight  $\sim 2.8 g$ -30 - +85 °C \* Temperature Range\*

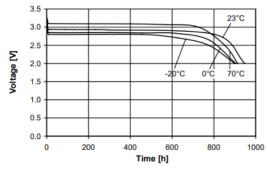
Self Discharge at 23°C < 1% / year

#### **Performance**

#### Discharge performance at 23°C

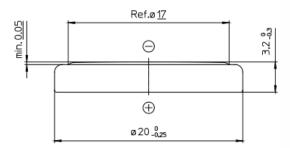


#### Temperature performance Load 12kΩ

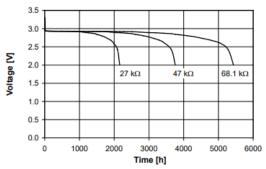


#### **Dimensions**

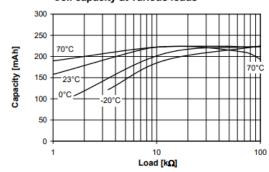
(According to IEC 60086)



#### Discharge performance at 23°C



## Cell capacity at various loads



\*In applications where the battery is exposed to temperatures above 60 °C, please contact Renata for consultancy.

\*\*Average discharge current for a yield of 70% of the nominal capacity with cut-off voltage of 2.0V at 23°C.

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