**Design Study** 

Primary Lithium Button Cells

# Continuous Positive Airway Pressure Machine - CPAP



#### **CPAP** machine

A CPAP machine sends a steady flow of oxygen into your nose and mouth as you sleep. This keeps your airways open and helps you breathe normally. This machine is often prescribed by doctors to treat sleep apnea disorders - in which breathing repeatedly stops and starts affecting the quality of sleep.

### **Battery challenge**

Safety is one of the biggest challenges for wearable, medical and healthcare devices. The battery must ensure continuous safety and provide enough energy at the same time to run the application. For this kind of application, a prolonged lifetime is expected as well.

For more information, please visit our website: www.varta-ag.com/en/industry/product-solutions/lithium

## **Technical solution** Primary Lithium Button Cell CR 2032 / 2450







CHARACTERISTICS	PRIMARY LITHIUM BUTTON

Capacity 230 mAh / 620 mAh @ 3V

20.0 mm / 24.0 mm diameter **Dimensions** 3.2 mm / 5.0 mm height

**Special Feature** Long Life time

Low self discharge < 1%/Y</li>

• 10 Years Shelf life Charactaristics

• Stable discharge behavior • Wide temperature range

 Reliable Lithium MNO2 System Environmentally friendly

No Passivation

UL Recognized

### **Primary Lithium Button Cells**

The lithium manganese dioxide cell chemistry was one of the first solid cathode cells commercially developed and is still the most widely used battery system today. These cells offer an excellent shelf life, wide operating temperature range, low self discharge rates and broad range of different sizes and capacities. Potential applications for these cells are devices in telecommunication, metering, instrumentation, sensoric and other portable equipment. Based on the outstanding energy density, cell performance and reliability, these cells have been able to meet the requirements of our customers worldwide.

- High open circuit and load voltage
- High Energy density (400Wh/kg or 600Wh/l)
- Low self-discharge for long storage and operating time
- Wide operating temperature range (-20 °C up to 70 °C)
- High pulse load capability
- **UL Recognition**

Safety Features

Bare cells, misc. versions for PCB mount and wire/ connectors available