



Primary battery for smoke detector use

Fire creates many dangers including heat, smoke and the toxic gas Carbon Monoxide CO. To prevent loss of life and avoid the damage caused by smoke and fire, a smoke detector must be reliable.

Therefore it is mandatory by law in several countries to install smoke detectors in new builds of houses and flats and also to upgrade existing buildings to have an appropriate early-warning system.

Battery challenge

Today, the battery of choice is a 9 V Block Primary Battery. However this is physically large, heavy, has a limited life time for the alkaline system and is high in cost for the lithium system. Further to this, modern electronics don't need a voltage level of 9 V. The solution is a non replaceable single cell 3 V Lithium Battery System. This embedded Lithium Primary Battery targets the new generation of Wireless Professional Smoke Detectors and provides up to 10 Years life time.

The battery has to cover the following sequences

- base/stand-by mode
- test mode
- end of life mode:
- alarm mode

Technical solution

The CR 2/3 AH cell, from our Primary Lithium Cylindrical Family, with a capacity of 1500 mAh and a lifetime up to 10 years, is specially designed for OEM main power longlife applications, e. g. smoke detectors, metering, automotive, etc.



| Characteristics | CR 2/3 AH PCBD |
|------------------------------|---------------------------|
| Voltage level | 3.0 V [MnO ₂] |
| Max. cont. discharge current | 1500 mA |
| Capacity | 1500 mAh |
| Discharge Temperature range | -20°C to +65°C |
| Weight | 16 g |
| Standard | UL approved |

Smoke detector battery

VARTA Microbattery Lithium MnO₂ Batteries offer extended battery life time solutions with reliable power supply for longlife energy demand and maintenance free use in dedicated OEM applications.

- reliable Li-MnO₂ System
- low self discharge rate
- wide temperature range
- high current capability
- long life time up to 10 years
- enviromental friendly
- no passivation
- UL recognized

For further details, please contact VARTA Microbattery or find us at: www.varta-microbattery.com

Smoke Detector

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