

Battery fuel gauge

Static state-of-charge battery fuel gauge circuit

This fuel gauge circuit is specifically designed to provides a visual indication of the stage-of-charge (SOC) without any other form of connection, thus independent of any other electronics integrated or connected with the battery.

Application

The circuit measures the battery voltage, and indicates the estimated state of charge (SOC) displayed on five LED's when the button is pressed.

The orange LED is lit when the SOC is above approximately 20%. The following four LED's are lit with a SOC of approximately 40%, 60%, 80% and 95% respectively.

This circuit provides a clear visual indication of the SOC without any other form of connection. It is designed for when a battery is in storage, or when a battery is at rest or static after a period of usage.

Benefits

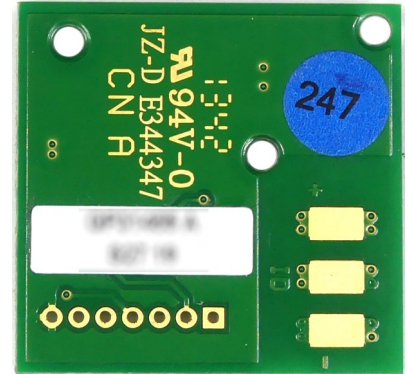
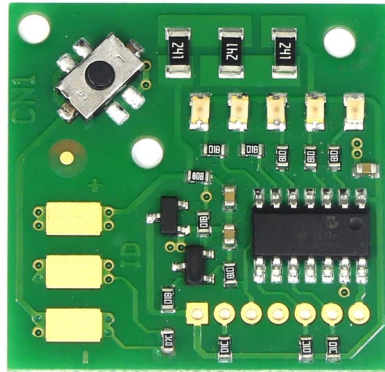
- Zero consumption when not in use.
- Simple and robust technology.
- Compatible with Li-ion batteries from 1 to 8 cells in series (3.0V-34.0V).
- Operational temperature range from -40°C to +85°C.
- High reliability.

Key features

- The SOC is displayed on 5 LED's , covering 100% to <20% state of charge levels.
- Identification resistor integrated.
- UL94-V0.
- **Designed and made in France**

Typical applications

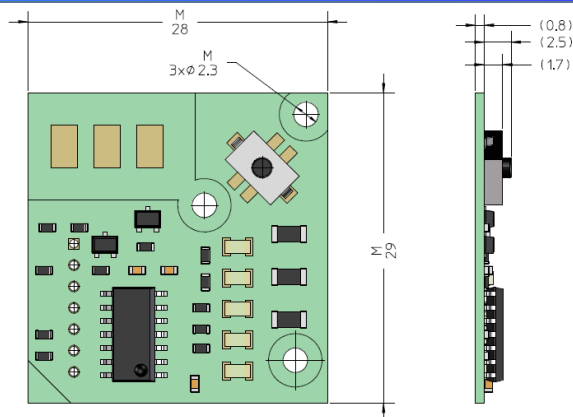
- Industrial equipment
- Medical devices
- Tracking applications
- Military applications
- Commercial applications
- Specialised industrial equipment



Operating characteristics

Operating characteristics	Value
Orange led blinking (1st LED)	< 20% SOC
Orange led fixed (1st LED)	> 20% SOC
1st Green led (2d LED)	> 40% SOC
2d Green led (3rd LED)	> 60% SOC
3rd Green led (4th LED)	> 80% SOC
4rd Green led (5th LED)	> 95% SOC
Circuit consumption at +25°C (operational)	8 mA to 35 mA
Stand-by consumption	0 µA
Operating temperature range	-40°C to +85°C
Minimum–Maximum voltage	3.0-V to 34.0 V
Dimension L x W x D (mm)	28 x 29 x 2.50

Mechanical view and drawings



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