

# MM8118W02

2023/07/20

## Outline

MM8118W is a battery fuel gauge IC for Li-ion battery and Li-polymer battery. This IC achieves ultra-low power consumption and is best FG for wearables whose battery capacity is small. Its small CSP package is also best for small products on which small footprint is preferable.

This IC measures temperature, voltage, and current with high-precision delta-sigma AD converter, integrates current value both at discharging and charging, and performs capacitance correction based on the measurement value and specific battery characteristics parameter. Thus the IC achieves excellent management ability for battery power.

MM8118W provides several features to make battery use safe and secure. Battery degradation detection which is based on capacitance change is available. And this IC has features for notification of these information.

MM8118 can be implemented at both of host-side and battery-side.

## Function

Low Power Consumption type

## Features

- High accuracy current/voltage measurement

Current and voltage value are measured by high accuracy 16bit delta-sigma AD converter.

The voltage resolution is 1mV and the current resolution is 1mA or 0.1mA (selectable).

- High accuracy battery power management

Battery power is based on integration of periodically-measured current and the value is corrected with open voltage(OCV) and battery characteristics parameters. The battery power is managed so as to minimize the error constantly.

- Ultra-low power consumption

The power-consumption is reduced significantly by long interval periodic fuel gauging which executes ADC and calculation every 60 seconds at no current flow. (for Standard setting)

## MM8118W02

2023/07/20

## Specifiction

Operating temperature [deg.C]	-20~85
Operation voltage [V]	2.5~5.5
Current consumption [μA]	30.5(Normal mode) 6.3(Full sleep mode)
Voltage sensing accuracy [mV]	1880~5000
Current sensing accuracy [mV]	-48~48
Temperature sensing accuracy [deg.C]	-20~85
Communication I/F	I2C(Max 400kHz)

## Package

WLCSP-15A