

BM3103 Series

Three-cell Battery Protectors

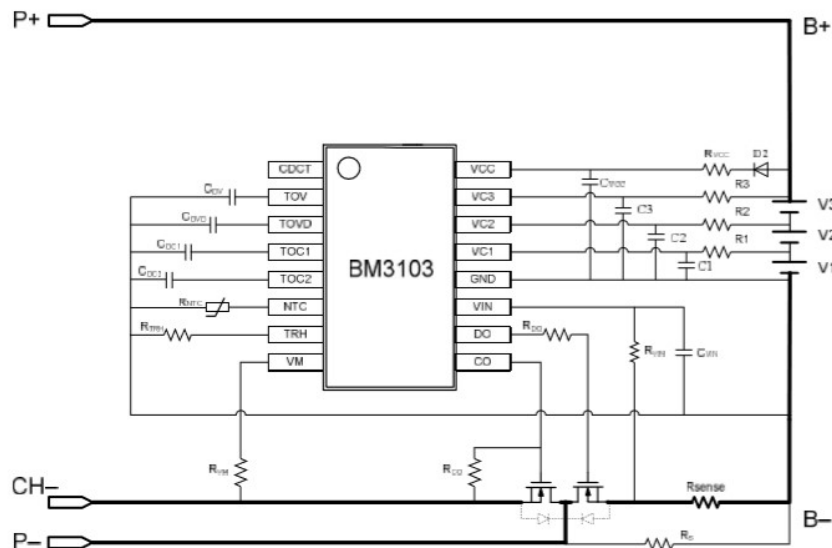


BM3103 Series IC is a high-precision, highly integrated dedicated 3-cell battery protection chip, suitable for power tools, vacuum cleaners and small back-up power. IC through the detection of each section of the battery voltage, discharge current and ambient temperature and other information to achieve battery overcharge, over release, discharge over-current, short-circuit, high-temperature protection functions, through the external capacitor to adjust the overcharge, over release, discharge overcurrent protection delay.

Features

- **High-accuracy voltage detection for each cell**
 - Overcharge threshold 3.6 V ~ 4.6 V accuracy: ± 25 mV (+25°C)
accuracy: ± 40 mV (-40°C to +85°C)
 - Overcharge hysteresis 0.12 V accuracy: ± 50 mV
 - Over-discharge threshold 1.6 V ~ 3.0 V accuracy: ± 80 mV
 - Over-discharge hysteresis 0.2 / 0.4 V accuracy: ± 100 mV
- **Three grades voltage detection of discharge overcurrent**
 - Discharge overcurrent 1 0.050 V ~ 0.150 V (25 mV step) accuracy: ± 15 mV
 - Discharge overcurrent 2 0.1 / 0.2 / 0.3 / 0.4 V
 - Short circuit 0.4 / 0.5 / 0.6 / 0.8 V
- **Setting of output delay time**
 - Over-discharge, discharge overcurrent 1 and discharge overcurrent 2 protection delay time can be set by external capacitors
- **Temperature protection**
- **Package**
 - SOP 16

Typical application circuit



Applications

- ✓ Power tool
- ✓ Vacuum cleaner
- ✓ Mobile sound box



Type/Item	Overcharge protection voltage V_{DET1}	Overcharge release voltage V_{REL1}	Over-discharge protection voltage V_{DET2}	Over-discharge release voltage V_{REL2}	Discharge overcurrent 1 detection voltage V_{OC1}	Discharge overcurrent 2 detection voltage V_{OC2}	Short circuit detection voltage V_{short}	Short circuit detection voltage V_{ovcc}
BM3103-TNDB	4.250V	4.130V	2.800V	3.000V	0.100V	0.200V	0.500V	-0.110V

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