

Voltage monitor IC for lithium-ion battery secondary protect

MM3734 Series

Outline

The MM3734 series are voltage monitor ICs for rechargeable lithium-ion or lithium-polymer batteries secondary protection, using a high voltage CMOS process. 1-cell lithium-ion or lithium-polymer battery can be detected overcharge state. Internal circuit is composed of voltage detectors, reference voltage sources, an oscillator, a counter circuit and logical circuits.

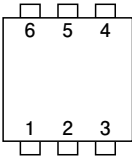
Features

(Unless otherwise specified, Topr=+25°C)

- (1) High-accuracy detection voltage
 - Detection voltage 4.0V to 5.0V, 5mV steps Accuracy±20mV, Accuracy±25mV (Topr=-5°C to +60°C)
 - Hysteresis voltage 0V to 1.0V, 50mV steps
 However, "Detection voltage-Hysteresis voltage<4.0V" is disabled.
- (2) Range of Detection delay time
 - Detection delay time Selectable from 0.25s, 1.02s, 2.048s, 4.096s
- (3) Low current consumption
 - Normal mode Typ. 1.5μA, Max. 3.0μA
 - Stand-by mode Max. 0.8μA
- (4) Absolute maximum ratings
 - VDD pin VSS-0.3V to +12V
 - OUT pin VDD-0.3V to VDD+0.3V
 - DS pin VSS-0.3V to VDD+0.3V
 - Storage temperature -55° C to +125° C
 - Operation temperature -40°C to +85°C

• Any products mentioned in this catalog are subject to any modification in their appearance and others for improvements without prior notification.
 • The details listed here are not a guarantee of the individual products at the time of ordering. When using the products, you will be asked to check their specifications.

Pin Assignment

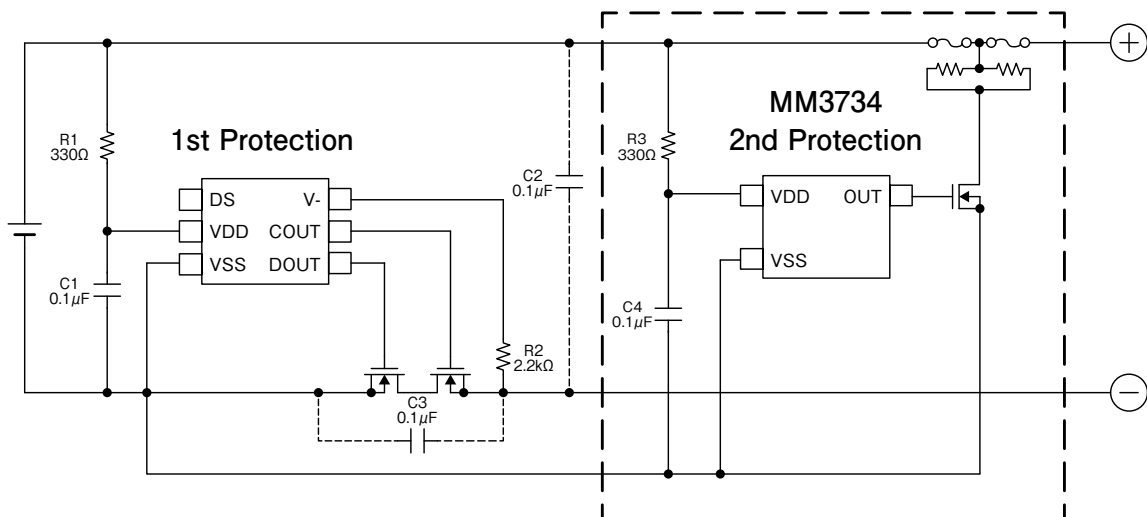
Top view SON-6C	Pin No.	Symbol	Function
	1	NC	No connection
	2	OUT	Output of detecting voltage. Output type is CMOS
	3	DS	Delay shorten terminal
	4	VSS	VSS terminal. Connected to ground
	5	VDD	VDD terminal. Connected to IC substrate
	6	NC	No connection

Product Line up

Product name	Package	Detection voltage	Release voltage	Detection delay time	Release delay time
		Vdet	Vrel	tVdet	tVrel
		V	V	s	ms
MM3734A01YRE	SON-6C	4.500	4.150	2.048	16
MM3734A03YRE	SON-6C	4.550	4.200	2.048	16

Please inquire to us, if you request a rank other than the above.

Application Circuit



- R3 and C4 stabilize a supply voltage ripple. However, the detection voltage rises by the current of penetration in IC of the voltage detection when R3 is enlarged, and the value of R3 is adjusted to 1kohm or less. Moreover, adjust the value of C4 to 0.01μF or more to do the stability operation, please.