

MM3474 Series

2023/07/20

Outline

MM3474 series is an overcharge, overdischarge and overcurrent protection IC for a lithium-ion / lithiumpolymer rechargeable secondary battery. Lithium-ion / lithium-polymer rechargeable secondary battery overcharge each cell, over discharge, and discharge overcurrent, short circuits can be detected. This supports 3 to 5 serial cells connected in series, and switches over to the desired no. of cells by sending High / Low signal to SEL terminal. This also provides the control terminals of output over discharge detection (SDC) and output over charge detection (SOC), which allows configuring an application with fewer external parts for 6 or more cells connected in series.

Product Series

For 3 to 5cells

Specifications

Product name	Package	OV battery charge function	Overdischarge release function	Overcharge detection voltage [V]	Overcharge release voltage [V]	Overdischarge detection voltage [V]
MM3474C01VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.800
MM3474C02VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.400
MM3474C03VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.800
MM3474C04VBE	TSOP-20D	Permission	Latch	4.250	4.150	2.800
MM3474C05VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.800
MM3474D01VBE	TSOP-20D	Permission	voltage	3.850	3.650	2.300

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MM3474D03VBE	TSOP-20D	Permission	voltage	3.800	3.600	2.000
MM3474E01VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.800
MM3474E02VBE	TSOP-20D	Permission	voltage	4.200	4.100	2.800
MM3474E03VBE	TSOP-20D	Permission	voltage	4.175	4.100	2.800
MM3474E04VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.800
MM3474E05VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.800
MM3474F01VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.500
MM3474F02VBE	TSOP-20D	Permission	voltage	4.200	4.100	2.500
MM3474F03VBE	TSOP-20D	Permission	Latch	4.250	4.150	2.500
MM3474F04VBE	TSOP-20D	Permission	voltage	4.250	4.210	2.500
MM3474F05VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.500
MM3474F06VBE	TSOP-20D	Permission	voltage	4.225	4.150	2.000
MM3474F08VBE	TSOP-20D	Permission	voltage	4.400	4.300	2.500
MM3474F11VBE	TSOP-20D	Permission	voltage	4.400	4.300	2.500
MM3474F12VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.500
MM3474G01VBE	TSOP-20D	Permission	voltage	4.200	4.100	2.750
MM3474G02VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.750
MM3474G03VBE	TSOP-20D	Permission	voltage	4.200	4.100	2.750
MM3474G05VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.750
MM3474G06VBE	TSOP-20D	Permission	voltage	4.225	4.100	2.750
MM3474G07VBE	TSOP-20D	Permission	voltage	4.250	4.150	2.750
MM3474J01VBE	TSOP-20D	Permission	voltage	4.250	4.100	2.800
MM3474K02VBE	TSOP-20D	Permission	voltage	4.250	4.100	3.000

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MM3474K03VBE	TSOP-20D	Permission	Latch	4.250	4.190	3.000
MM3474K04VBE	TSOP-20D	Permission	voltage	4.175	4.100	3.000
MM3474L02VBE	TSOP-20D	Permission	voltage	3.750	3.550	2.200
MM3474L03VBE	TSOP-20D	Permission	voltage	3.650	3.500	2.000
MM3474L04VBE	TSOP-20D	Permission	Latch	3.750	3.550	2.200
MM3474M01VBE	TSOP-20D	Permission	voltage	4.350	4.150	2.300
MM3474N01VBE	TSOP-20D	Permission	Latch	3.900	3.600	2.000
MM3474P03VBE	TSOP-20D	Permission	voltage	4.230	4.220	2.800
MM3474P04VBE	TSOP-20D	Permission	voltage	4.200	4.170	2.750
MM3474P05VBE	TSOP-20D	Permission	Latch	4.200	4.140	2.750
MM3474P06VBE	TSOP-20D	Permission	voltage	4.230	4.220	2.800
MM3474R03VBE	TSOP-20D	Prohibition	voltage	4.225	4.100	2.750
MM3474S01VBE	TSOP-20D	Permission	voltage	3.600	3.500	2.800

Product name	Overdischarge release voltage [V]	Discharging overcurrent detection voltage [V]	Short detection voltage [V]	Overcharge detection delay time [s]	Overcharge release delay time [ms]	Overdischarge detection delay time [ms]	Overdischarge release delay time [ms]
MM3474C01VBE	3.000	0.250	1.000	1.000	100.0	1000.0	15.0
MM3474C02VBE	2.600	0.250	1.000	1.000	100.0	1000.0	15.0
MM3474C03VBE	3.000	0.250	0.800	1.000	100.0	1000.0	15.0
MM3474C04VBE	3.000	0.150	0.250	1.000	100.0	1000.0	15.0
MM3474C05VBE	3.000	0.150	0.250	1.000	100.0	1000.0	15.0
MM3474D01VBE	2.500	0.150	1.000	1.000	100.0	1000.0	15.0
MM3474D03VBE	2.500	0.150	0.600	1.000	100.0	1000.0	15.0
MM3474E01VBE	3.000	0.150	1.000	1.000	100.0	1000.0	15.0
MM3474E02VBE	3.000	0.150	1.000	1.000	100.0	1000.0	15.0
MM3474E03VBE	3.000	0.150	0.500	1.000	100.0	1000.0	15.0
MM3474E04VBE	3.000	0.100	0.500	1.000	100.0	1000.0	15.0

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MM3474E05VBE	3.000	0.050	0.400	1.000	100.0	1000.0	15.0
MM3474F01VBE	3.000	0.150	1.000	1.000	100.0	1000.0	15.0
MM3474F02VBE	3.000	0.100	1.000	1.000	100.0	1000.0	15.0
MM3474F03VBE	3.000	0.100	0.300	1.000	100.0	1000.0	15.0
MM3474F04VBE	3.000	0.100	0.800	1.000	100.0	1000.0	15.0
MM3474F05VBE	3.000	0.100	0.250	1.000	100.0	1000.0	15.0
MM3474F06VBE	3.000	0.050	0.200	1.000	100.0	1000.0	15.0
MM3474F08VBE	3.000	0.120	0.250	1.000	100.0	1000.0	15.0
MM3474F11VBE	3.000	0.150	0.500	1.000	100.0	1000.0	15.0
MM3474F12VBE	3.000	0.200	0.500	1.000	100.0	1000.0	15.0
MM3474G01VBE	3.000	0.100	1.000	1.000	100.0	1000.0	15.0
MM3474G02VBE	3.000	0.100	1.000	1.000	100.0	1000.0	15.0
MM3474G03VBE	3.000	0.100	0.400	1.000	100.0	1000.0	15.0
MM3474G05VBE	3.000	0.100	0.400	1.000	100.0	1000.0	15.0
MM3474G06VBE	3.000	0.100	0.800	1.000	100.0	1000.0	15.0
MM3474G07VBE	3.000	0.100	0.200	1.000	100.0	1000.0	15.0
MM3474J01VBE	3.000	0.050	1.000	1.000	100.0	1000.0	15.0
MM3474K02VBE	3.225	0.100	0.400	1.000	100.0	1000.0	15.0
MM3474K03VBE	3.200	0.080	0.700	1.000	100.0	1000.0	15.0
MM3474K04VBE	3.200	0.100	0.500	1.000	100.0	1000.0	15.0
MM3474L02VBE	2.700	0.100	0.400	1.000	100.0	1000.0	15.0
MM3474L03VBE	2.700	0.200	0.250	1.000	100.0	1000.0	15.0
MM3474L04VBE	2.700	0.100	0.400	1.000	100.0	1000.0	15.0
MM3474M01VBE	3.000	0.150	0.500	1.000	100.0	1000.0	15.0
MM3474N01VBE	3.000	0.100	0.200	1.000	100.0	1000.0	15.0
MM3474P03VBE	3.400	0.100	0.800	1.000	100.0	1000.0	15.0
MM3474P04VBE	2.800	0.100	1.000	1.000	100.0	1000.0	15.0
MM3474P05VBE	2.810	0.100	0.500	1.000	100.0	1000.0	15.0
MM3474P06VBE	3.000	0.100	0.800	1.000	100.0	1000.0	15.0
MM3474R03VBE	3.000	0.100	0.800	1.000	100.0	1000.0	15.0
MM3474S01VBE	3.000	0.100	0.400	1.000	100.0	1000.0	15.0

Product name	Discharging overcurrent detection delay time [ms]	Discharging overcurrent release delay time [ms]	Short detection delay time [ms]
MM3474C01VBE	10.0	10.00	0.300
MM3474C02VBE	10.0	10.00	0.300
MM3474C03VBE	10.0	10.00	0.300
MM3474C04VBE	10.0	10.00	0.300
MM3474C05VBE	10.0	10.00	0.300

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MM3474D01VBE	10.0	10.00	0.300
MM3474D03VBE	10.0	10.00	0.300
MM3474E01VBE	10.0	10.00	0.300
MM3474E02VBE	10.0	10.00	0.300
MM3474E03VBE	10.0	10.00	0.300
MM3474E04VBE	10.0	10.00	0.300
MM3474E05VBE	10.0	10.00	0.300
MM3474F01VBE	10.0	10.00	0.300
MM3474F02VBE	10.0	10.00	0.300
MM3474F03VBE	10.0	10.00	0.300
MM3474F04VBE	10.0	10.00	0.300
MM3474F05VBE	10.0	10.00	0.300
MM3474F06VBE	10.0	10.00	0.300
MM3474F08VBE	10.0	10.00	0.300
MM3474F11VBE	10.0	10.00	0.300
MM3474F12VBE	10.0	10.00	0.300
MM3474G01VBE	10.0	10.00	0.300
MM3474G02VBE	10.0	10.00	0.300
MM3474G03VBE	10.0	10.00	0.300
MM3474G05VBE	10.0	10.00	0.300
MM3474G06VBE	10.0	10.00	0.300
MM3474G07VBE	10.0	10.00	0.300
MM3474J01VBE	10.0	10.00	0.300
MM3474K02VBE	10.0	10.00	0.300
MM3474K03VBE	10.0	10.00	0.300
MM3474K04VBE	10.0	10.00	0.300
MM3474L02VBE	10.0	10.00	0.300
MM3474L03VBE	10.0	10.00	0.300
MM3474L04VBE	10.0	10.00	0.300
MM3474M01VBE	10.0	10.00	0.300
MM3474N01VBE	10.0	10.00	0.300
MM3474P03VBE	10.0	10.00	0.200
MM3474P04VBE	10.0	10.00	0.300
MM3474P05VBE	10.0	10.00	0.300
MM3474P06VBE	10.0	10.00	0.200
MM3474R03VBE	10.0	10.00	0.300
MM3474S01VBE	10.0	10.00	0.300

Package

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TSOP-20D