

MM3280 Series

2023/07/20

Outline

MM3280 series are protection IC using high voltage CMOS process for overcharge, overdischarge and overcurrent protection of the rechargeable Lithium-ion or Lithium-polymer battery. The overcharge, overdischarge, discharging overcurrent, short, charging overcurrent (optional), and over voltage charger (optional) protection of the rechargeable one-cell Lithium-ion or Lithium-polymer battery can be detected. Each of these IC composed of four voltage detectors, short detection circuit, reference voltage sources, oscillator, counter circuit and logical circuits.

Product Series

For one-cell

Features

1. Range and accuracy of detection/release voltage

- Overcharge detection voltage 3.6V to 5.0V, 5mV steps Accuracy±20mV
- Overcharge release voltage 3.6V to 4.5V, 50mV steps Accuracy±30mV
- Overdischarge detection voltage 2.0V to 3.0V, 50mV steps Accuracy±35mV
- Overdischarge release voltage 2.0V to 3.5V, 50mV steps Accuracy±100mV
- Discharging overcurrent detection voltage +50mV to +300mV, 5mV steps Accuracy±10mV
- Charging overcurrent detection voltage -300mV to -50mV, 5mV steps Accuracy±20mV
- Short detection voltage Selection from 0.7V, 0.8V, 0.9V Accuracy±100mV
- Over voltage charger detection voltage VDD-8.0V fixed Accuracy±2.0V
- Over voltage charger release voltage VDD-7.3V fixed Accuracy±2.0V

2. Range of detection delay time

- Overcharge detection delay time Selection from 0.25s, 1.0s, 1.2s, 4.5s
- Overdischarge detection delay time Selection from 20ms, 24ms, 96ms, 125ms, 128ms, 144ms
- Discharging overcurrent detection delay time Selection from 8ms, 12ms, 16ms, 20ms, 24ms, 48ms, 96ms, 160ms

MM3280 Series

2023/07/20

- Charging overcurrent detection delay time Selection from 4ms, 6ms, 8ms, 10ms, 12ms, 16ms, 96ms
- Short detection delay time Selection from 200 μ s, 300 μ s, 400 μ s fixed

3. 0V battery charge function Selection from "Prohibition" or "Permission"

4. The overcharge detection delay timer reset time function(function for the pulse charge)is provided.

5. Low current consumption

- Normal mode Typ. 3.0 μ A, Max. 6.0 μ A
- Stand-by mode Max. 0.1 μ A (For "Charger connection release" the overdischarge release condition.)
Max. 0.5 μ A (For "Voltage release" the overdischarge release condition.)

Specifications

Product name	Package	Pin No.	0V battery charge function	Overcharge release function	Overdischarge release function	Discharging overcurrent release function
MM3280A01RRE	SSON-6J	1	Permission	voltage	Latch	voltage
MM3280B04RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280B05RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280C01RRE	SSON-6K	3	Permission	voltage	Latch	voltage
MM3280C01NRH	SOT-26AorB	3	Permission	voltage	Latch	voltage
MM3280C04RRE	SSON-6K	3	Permission	voltage	Latch	voltage
MM3280C05RRE	SSON-6K	3	Permission	voltage	Latch	voltage
MM3280EA1YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EA2RRE	SSON-6J	4	Permission	voltage	voltage	voltage
MM3280EA3YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EA4YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EA5YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EA6YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EA7YRE	SON-6C	4	Permission	voltage	voltage	voltage

MM3280 Series

2023/07/20

MM3280EA9YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAAYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EACNRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280EADYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAFYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAGYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAHYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EALYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAMYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EANYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EASYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EATYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAUZYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAVYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAWYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAYYRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280EAZRR4	SSON-6UorV	4	Permission	voltage	voltage	voltage
MM3280EB1RRE	SSON-6J	4	Prohibition	voltage	voltage	voltage
MM3280EB2YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280EB3YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280EB4YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280EB5YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280EB6YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280EB7YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280EBAYRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280EC3NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280EC5NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280EC6NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280EC7NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280EG1RRE	SSON-6J	4	Prohibition	voltage	voltage	voltage
MM3280EH3RR4	SSON-6UorV	4	Permission	voltage	Latch	voltage
MM3280EJ1NRH	SOT-26AorB		Prohibition	voltage	Latch	voltage

MM3280 Series

2023/07/20

MM3280EL1NRH	SOT-26AorB		Permission	voltage	Latch	voltage
MM3280EL4NRH	SOT-26AorB		Permission	voltage	Latch	voltage
MM3280EL5YRE	SON-6C	4	Permission	voltage	Latch	voltage
MM3280EL6YRE	SON-6C	4	Permission	voltage	Latch	voltage
MM3280F02RRE	SSON-6J	1	Permission	voltage	Latch	voltage
MM3280G01RRE	SSON-6J	1	Prohibition	voltage	Latch	voltage
MM3280G02RRE	SSON-6J	1	Prohibition	voltage	Latch	voltage
MM3280H01NRH	SOT-26AorB		Permission	voltage	Latch	voltage
MM3280H02NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280H03NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280H04NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280H08NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280HA1NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280HA2YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280I01NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280I02NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J01NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J03NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J04NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J05NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J07NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J12NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J17NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280J18NRH	SOT-26AorB		Permission	voltage	voltage	voltage

MM3280 Series

2023/07/20

MM3280JA1YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280JB1NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JB2NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JB3NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JB5NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JB7NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JC2YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280JC3YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280JD2YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280JD4YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280JD5NRH	SOT-26AorB		Prohibition	voltage	voltage	voltage
MM3280JF1YRE	SON-6C	4	Permission	voltage	Latch	voltage
MM3280JF2YRE	SON-6C	4	Permission	voltage	Latch	voltage
MM3280JH1YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280JH2YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280JH3YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280JH4YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280JH5YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280JH6NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JH7NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JH8NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JHANRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JJ1YRE	SON-6C	4	Permission	voltage	voltage	voltage
MM3280JL2YRE	SON-6C	4	Prohibition	voltage	Latch	voltage
MM3280JM1YRE	SON-6C	4	Prohibition	voltage	Latch	voltage
MM3280JP1NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JP3NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280JP4NRH	SOT-26AorB		Permission	voltage	voltage	voltage
MM3280N01YRE	SON-6C	1	Permission	Latch	Latch	voltage

MM3280 Series

2023/07/20

MM3280P09RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280P10RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280P12RRE	SSON-6E	2	Permission	voltage	Latch	voltage
MM3280P16RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280P17RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280P20RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280P21RRE	SSON-6J	2	Permission	voltage	Latch	voltage
MM3280P22RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280P23RRE	SSON-6J	2	Permission	voltage	Latch	voltage
MM3280P25RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280P33RRE	SSON-6J	2	Prohibition	voltage	Latch	voltage
MM3280PA1RRE	SSON-6J	2	Prohibition	Latch	Latch	voltage
MM3280PA6RRE	SSON-6J	2	Permission	Latch	Latch	voltage
MM3280PA7RRE	SSON-6J	2	Prohibition	Latch	Latch	voltage
MM3280PA9RRE	SSON-6J	2	Prohibition	Latch	Latch	voltage
MM3280S01NRH	SOT-26AorB		Permission	voltage	Latch	voltage
MM3280S02RRE	SSON-6J	1	Permission	voltage	Latch	voltage
MM3280SB9YRE	SON-6C	4	Prohibition	voltage	voltage	voltage
MM3280T01NRH	SOT-26AorB		Prohibition	Latch	Latch	voltage
MM3280T02RRE	SSON-6J	1	Prohibition	Latch	Latch	voltage
MM3280T03NRH	SOT-26AorB		Prohibition	Latch	Latch	voltage
MM3280T04NRH	SOT-26AorB		Prohibition	Latch	Latch	voltage
MM3280W01NRH	SOT-26AorB		Permission	Latch	voltage	voltage
	SOT					

MM3280 Series

2023/07/20

MM3280W06NRH	SUI-26AorB	Prohibition	Latch	voltage	voltage		
Product name	Overcharge detection voltage [V]	Overcharge release voltage [V]	Overdischarge detection voltage [V]	Overdischarge release voltage [V]	Discharging overcurrent detection voltage [V]	Charging overcurrent detection voltage [V]	Sho detec volta [V]
MM3280A01RRE	4.300	4.100	2.300	2.300	0.105	-0.1000	0.900
MM3280B04RRE	4.445	4.245	2.300	2.300	0.060	-0.0700	0.900
MM3280B05RRE	4.445	4.245	2.300	2.300	0.050	-0.0700	0.300
MM3280C01RRE	4.225	4.025	2.800	2.800	0.150	-0.1500	0.900
MM3280C01NRH	4.225	4.025	2.800	2.800	0.150	-0.1500	0.900
MM3280C04RRE	4.275	4.175	2.300	2.300	0.150	-0.1500	0.900
MM3280C05RRE	4.375	4.275	2.300	2.300	0.200	-0.1500	0.900
MM3280EA1YRE	4.275	4.075	2.500	2.900	0.130	-0.1300	0.700
MM3280EA2RRE	4.425	4.225	2.500	2.900	0.130	-0.1300	0.700
MM3280EA3YRE	4.415	4.215	2.500	2.900	0.100	-0.1000	0.300
MM3280EA4YRE	4.425	4.225	3.000	3.200	0.130	-0.1300	0.700
MM3280EA5YRE	4.425	4.225	2.800	3.000	0.130	-0.1300	0.700
MM3280EA6YRE	4.420	4.220	2.500	2.900	0.050	-0.0400	0.300
MM3280EA7YRE	4.425	4.225	2.800	3.000	0.130	-0.1300	0.700
MM3280EA9YRE	4.425	4.225	2.500	2.800	0.130	-0.1000	0.500
MM3280EAAAYRE	4.425	4.225	2.500	2.900	0.200	-0.1500	0.500
MM3280EACNRH	4.400	4.200	2.500	2.900	0.250	-0.1500	0.500
MM3280EADYRE	4.425	4.225	2.400	3.000	0.175	-0.1300	0.800
MM3280EAFYRE	4.475	4.275	2.500	2.900	0.100	-0.1000	0.300
MM3280EAGYRE	4.475	4.275	2.500	2.900	0.080	-0.0800	0.300
MM3280EAHYRE	4.475	4.275	2.500	2.900	0.050	-0.0500	0.300
MM3280EALYRE	4.475	4.275	2.800	3.000	0.130	-0.1300	0.700
MM3280EAMYRE	4.475	4.275	2.500	2.900	0.130	-0.1250	0.380
MM3280EANYRE	4.425	4.225	2.800	3.000	0.050	-0.0500	0.400
MM3280EASYRE	4.425	4.225	2.500	2.900	0.130	-0.1300	0.700
MM3280EATYRE	4.520	4.320	2.500	2.900	0.130	-0.1300	0.480
MM3280EAUYYRE	4.475	4.275	2.500	2.900	0.130	-0.1300	0.300
MM3280EAVYRE	4.425	4.225	2.500	2.800	0.190	-0.1500	0.500
MM3280EAWYRE	4.475	4.275	2.500	2.600	0.130	-0.1000	0.500
MM3280EAYYRE	4.475	4.275	2.500	2.600	0.080	-0.0600	0.300
MM3280EAZRR4	4.470	4.270	2.500	2.900	0.130	-0.1300	0.400
MM3280EB1RRE	4.425	4.225	2.500	2.900	0.130	-0.1300	0.700
MM3280EB2YRE	4.415	4.215	2.500	2.900	0.100	-0.1000	0.300

MM3280 Series

2023/07/20

MM3280EB3YRE	4.450	4.250	2.500	2.900	0.100	-0.1000	0.300
MM3280EB4YRE	4.420	4.220	2.500	2.900	0.050	-0.0400	0.300
MM3280EB5YRE	4.475	4.275	2.500	2.900	0.130	-0.1000	0.300
MM3280EB6YRE	4.475	4.275	2.500	2.900	0.150	-0.1250	0.400
MM3280EB7YRE	4.400	4.200	2.500	2.900	0.250	-0.2500	0.500
MM3280EBAYRE	4.475	4.275	2.500	2.900	0.110	-0.1000	0.300
MM3280EC3NRH	4.425	4.225	2.500	2.800	0.130	-0.1300	0.500
MM3280EC5NRH	4.475	4.275	2.500	2.900	0.150	-0.1500	0.500
MM3280EC6NRH	4.280	4.080	2.400	2.800	0.235	-0.1000	0.500
MM3280EC7NRH	4.280	4.080	2.800	3.000	0.200	-0.1000	0.500
MM3280EG1RRE	4.475	4.375	2.000	2.000	0.075	-0.0750	0.500
MM3280EH3RR4	4.425	4.225	2.000	2.300	0.130	-0.1250	0.380
MM3280EJ1NRH	4.280	4.080	2.800	2.800	0.150	-0.1000	0.500
MM3280EL1NRH	4.400	4.200	3.250	3.250	0.200	-0.1500	0.500
MM3280EL4NRH	4.280	4.080	3.000	3.000	0.080	-0.1000	0.500
MM3280EL5YRE	4.275	4.075	3.000	3.000	0.200	-0.0800	0.700
MM3280EL6YRE	4.300	4.100	2.400	2.400	0.150	-0.1000	0.600
MM3280F02RRE	4.300	4.100	2.300	2.300	0.130		0.900
MM3280G01RRE	4.280	4.100	2.300	2.300	0.050		0.900
MM3280G02RRE	4.280	4.100	2.800	2.800	0.050		0.900
MM3280H01NRH	4.275	4.175	3.000	3.200	0.150		0.900
MM3280H02NRH	4.280	4.100	2.300	2.500	0.150		0.900
MM3280H03NRH	4.215	4.115	2.800	2.900	0.150		0.900
MM3280H04NRH	3.800	3.600	2.300	2.500	0.100		0.900
MM3280H08NRH	4.280	4.100	2.300	2.500	0.200		0.900
MM3280HA1NRH	4.420	4.235	2.500	2.700	0.200		0.900
MM3280HA2YRE	4.420	4.235	2.500	2.700	0.200		0.900
MM3280I01NRH	4.250	4.050	2.500	3.000	0.150		0.900
MM3280I02NRH	4.250	4.050	2.500	3.000	0.100		0.900
MM3280J01NRH	4.250	4.050	2.500	3.000	0.200	-0.1000	0.800
MM3280J03NRH	3.800	3.600	2.000	2.380	0.100	-0.1000	0.800
MM3280J04NRH	4.275	4.215	3.000	3.200	0.150	-0.1000	0.800
MM3280J05NRH	4.250	4.190	2.800	3.000	0.150	-0.1000	0.800
MM3280J07NRH	4.250	4.190	2.500	3.000	0.100	-0.1000	0.700
MM3280J12NRH	4.280	4.100	2.300	2.500	0.200	-0.2000	0.800
MM3280J17NRH	3.900	3.800	2.000	2.500	0.100	-0.1000	0.600
MM3280J18NRH	4.250	4.190	3.000	3.200	0.150	-0.1000	0.800
MM3280JA1YRE	4.425	4.225	2.500	2.900	0.130	-0.1300	0.700
MM3280JB1NRH	4.425	4.225	2.500	2.900	0.130	-0.1300	0.700
MM3280JB2NRH	4.350	4.150	2.500	2.900	0.200	-0.1000	0.700

MM3280 Series

2023/07/20

MM3280JB3NRH	4.375	4.275	2.800	3.000	0.170	-0.1500	0.700
MM3280JB5NRH	4.400	4.300	2.800	3.000	0.150	-0.1500	0.700
MM3280JB7NRH	4.425	4.225	2.500	2.900	0.160	-0.1600	0.700
MM3280JC2YRE	4.425	4.225	2.500	2.900	0.130	-0.1300	0.700
MM3280JC3YRE	4.425	4.225	2.500	2.900	0.210	-0.1500	0.300
MM3280JD2YRE	4.425	4.225	2.500	2.900	0.130	-0.1300	0.700
MM3280JD4YRE	4.425	4.225	2.300	2.650	0.170	-0.1300	0.700
MM3280JD5NRH	4.250	4.100	3.000	3.200	0.100	-0.1000	0.600
MM3280JF1YRE	4.425	4.225	2.500	2.500	0.100	-0.1000	0.500
MM3280JF2YRE	4.425	4.225	2.500	2.500	0.150	-0.1000	0.500
MM3280JH1YRE	4.415	4.215	2.500	2.900	0.045	-0.0450	0.300
MM3280JH2YRE	4.415	4.215	2.500	2.900	0.080	-0.0800	0.300
MM3280JH3YRE	4.425	4.200	2.300	2.800	0.100	-0.0600	0.300
MM3280JH4YRE	4.425	4.200	2.300	2.800	0.055	-0.0600	0.250
MM3280JH5YRE	4.470	4.270	2.500	2.900	0.130	-0.1300	0.400
MM3280JH6NRH	4.375	4.275	2.800	3.000	0.200	-0.1500	0.600
MM3280JH7NRH	4.425	4.325	2.800	3.000	0.200	-0.1500	0.600
MM3280JH8NRH	4.280	4.080	2.800	3.000	0.150	-0.1500	0.500
MM3280JHANRH	4.475	4.275	2.500	2.600	0.200	-0.1500	0.700
MM3280JJ1YRE	4.425	4.225	2.450	2.850	0.120	-0.1300	0.700
MM3280JL2YRE	4.425	4.225	2.500	2.500	0.180	-0.1250	0.500
MM3280JM1YRE	4.400	4.200	2.900	2.900	0.100	-0.1000	0.400
MM3280JP1NRH	4.250	4.150	2.800	3.000	0.100	-0.0500	0.450
MM3280JP3NRH	4.250	4.100	2.500	3.000	0.150	-0.0800	0.450
MM3280JP4NRH	4.250	4.100	2.800	3.000	0.150	-0.0800	0.450
MM3280N01YRE	4.280	4.180	2.300	2.300	0.160	-0.1600	0.900
MM3280P09RRE	4.280	4.180	2.700	2.700	0.065	-0.0750	0.900
MM3280P10RRE	4.280	4.100	2.300	2.300	0.170	-0.1700	0.900
MM3280P12RRE	4.280	4.100	2.300	2.300	0.150	-0.2200	0.900
MM3280P16RRE	4.280	4.100	2.300	2.300	0.160	-0.1500	0.900
MM3280P17RRE	4.280	4.100	2.300	2.300	0.120	-0.1200	0.900
MM3280P20RRE	4.280	4.100	2.300	2.300	0.200	-0.1200	0.900
MM3280P21RRE	4.430	4.190	2.300	2.300	0.240	-0.2500	0.900
MM3280P22RRE	4.420	4.240	2.300	2.300	0.210	-0.2200	0.900
MM3280P23RRE	4.430	4.250	2.300	2.300	0.120	-0.1200	0.900
MM3280P25RRE	4.280	4.100	2.300	2.300	0.160	-0.1000	0.900
MM3280P33RRE	4.430	4.230	2.700	2.700	0.080	-0.0800	0.500
MM3280PA1RRE	4.420	4.420	2.300	2.300	0.115	-0.1300	0.500
MM3280PA6RRE	4.370	4.370	2.300	2.300	0.140	-0.1300	0.500

MM3280 Series

2023/07/20

MM3280PA7RRE	4.430	4.430	2.800	2.800	0.080	-0.0800	0.500
MM3280PA9RRE	4.280	4.280	2.700	2.700	0.070	-0.0900	0.500
MM3280S01NRH	4.280	4.080	3.000	3.000	0.080		0.900
MM3280S02RRE	4.300	4.100	3.000	3.000	0.250		0.900
MM3280SB9YRE	4.475	4.275	2.500	2.900	0.160	-0.1250	0.700
MM3280T01NRH	4.280	4.280	2.800	2.800	0.050	-0.1000	0.900
MM3280T02RRE	4.280	4.280	2.800	2.800	0.050	-0.1000	0.900
MM3280T03NRH	3.670	3.670	2.050	2.050	0.050	-0.0600	0.400
MM3280T04NRH	4.280	4.280	2.400	2.400	0.050	-0.0600	0.400
MM3280W01NRH	4.280	4.280	2.300	2.500	0.150	-0.1500	0.900
MM3280W06NRH	4.325	4.325	2.500	2.900	0.150	-0.1500	0.700

Product name	Overcharge detection delay time [s]	Overcharge release delay time [ms]	Overdischarge detection delay time [ms]	Overdischarge release delay time [ms]	Discharging overcurrent detection delay time [ms]	Discharging overcurrent release delay time [ms]	Charge overcurrent detection delay time [ms]
MM3280A01RRE	4.500	8.0	125.0	1.0	12.0	1.00	16.0
MM3280B04RRE	4.500	8.0	96.0	2.0	12.0	4.00	8.0
MM3280B05RRE	4.500	8.0	96.0	2.0	160.0	4.00	8.0
MM3280C01RRE	1.000	2.0	96.0	4.0	12.0	4.00	6.0
MM3280C01NRH	1.000	2.0	96.0	4.0	12.0	4.00	6.0
MM3280C04RRE	1.000	2.0	96.0	4.0	12.0	4.00	6.0
MM3280C05RRE	1.000	2.0	96.0	4.0	12.0	4.00	6.0
MM3280EA1YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EA2RRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EA3YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EA4YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EA5YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EA6YRE	1.020	16.0	64.0	1.0	12.0	1.00	8.0
MM3280EA7YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EA9YRE	1.020	16.0	32.0	1.0	8.0	1.00	8.0
MM3280EAAYRE	1.020	16.0	96.0	1.0	12.0	1.00	10.0
MM3280EACNRH	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EADYRE	1.020	16.0	20.0	1.0	12.0	1.00	8.0
MM3280EAFYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EAGYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EAHYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EALYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EAMYRE	1.020	16.0	64.0	1.0	8.0	1.00	8.0
MM3280EANYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0

MM3280 Series

2023/07/20

Part Number	Width (mm)	Height (mm)	Length (mm)	Thickness (mm)	Weight (g)	Volume (cm ³)	Area (cm ²)
MM3280EASYRE	1.020	16.0	96.0	1.0	8.0	1.00	8.0
MM3280EATYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EAUZYRE	1.020	16.0	20.0	1.0	12.0	2.00	8.0
MM3280EAVYRE	1.020	16.0	32.0	1.0	8.0	1.00	8.0
MM3280EAWYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EAYYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EAZRR4	1.020	16.0	96.0	1.0	12.0	1.00	10.0
MM3280EB1RRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EB2YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EB3YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EB4YRE	1.020	16.0	64.0	1.0	12.0	1.00	8.0
MM3280EB5YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EB6YRE	1.020	16.0	64.0	1.0	8.0	1.00	8.0
MM3280EB7YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EBAYRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EC3NRH	1.020	16.0	96.0	1.0	10.0	1.00	10.0
MM3280EC5NRH	1.020	16.0	64.0	1.0	8.0	1.00	8.0
MM3280EC6NRH	1.020	16.0	96.0	1.0	10.0	1.00	10.0
MM3280EC7NRH	1.020	16.0	96.0	1.0	10.0	1.00	10.0
MM3280EG1RRE	0.576	8.0	144.0	2.0	4.2	0.50	4.0
MM3280EH3RR4	1.020	16.0	32.0	1.0	16.0	1.00	16.0
MM3280EJ1NRH	1.216	16.0	144.0	1.0	8.0	1.00	8.0
MM3280EL1NRH	1.020	16.0	128.0	1.0	8.0	1.00	8.0
MM3280EL4NRH	1.020	16.0	128.0	1.0	8.0	1.00	8.0
MM3280EL5YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280EL6YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280F02RRE	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280G01RRE	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280G02RRE	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280H01NRH	1.000	8.0	125.0	4.0	12.0	4.00	
MM3280H02NRH	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280H03NRH	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280H04NRH	1.000	8.0	125.0	4.0	12.0	4.00	
MM3280H08NRH	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280HA1NRH	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280HA2YRE	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280IO1NRH	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280IO2NRH	1.000	8.0	24.0	4.0	12.0	4.00	
MM3280J01NRH	1.000	16.0	20.0	1.0	12.0	1.00	8.0

MM3280 Series

2023/07/20

MM3280J03NRH	1.000	16.0	96.0	1.0	20.0	1.00	12.0
MM3280J04NRH	1.000	16.0	96.0	1.0	20.0	1.00	12.0
MM3280J05NRH	1.000	16.0	96.0	1.0	20.0	1.00	12.0
MM3280J07NRH	1.000	16.0	96.0	1.0	20.0	1.00	12.0
MM3280J12NRH	1.000	16.0	20.0	1.0	12.0	1.00	8.0
MM3280J17NRH	1.200	16.0	144.0	1.0	32.0	1.00	12.0
MM3280J18NRH	1.000	16.0	96.0	1.0	20.0	1.00	12.0
MM3280JA1YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JB1NRH	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JB2NRH	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JB3NRH	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JB5NRH	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JB7NRH	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JC2YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JC3YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JD2YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JD4YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JD5NRH	1.000	16.0	96.0	1.0	16.0	1.00	12.0
MM3280JF1YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JF2YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH1YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH2YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH3YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH4YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH5YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH6NRH	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH7NRH	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JH8NRH	1.200	16.0	144.0	1.0	9.0	1.00	8.0
MM3280JHANRH	1.000	16.0	96.0	1.0	12.0	1.00	8.0
MM3280JJ1YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JL2YRE	1.000	16.0	32.0	1.0	8.0	1.00	8.0
MM3280JM1YRE	1.000	16.0	96.0	1.0	12.0	1.00	10.0
MM3280JP1NRH	1.000	16.0	1000.0	1.0	500.0	1.00	1000.
MM3280JP3NRH	1.000	16.0	3000.0	1.0	1000.0	1.00	1000.
MM3280JP4NRH	1.000	16.0	3000.0	1.0	1000.0	1.00	1000.
MM3280N01YRE	1.000	8.0	96.0	1.0	20.0	1.00	16.0
MM3280P09RRE	1.000	32.0	96.0	4.0	20.0	4.00	18.0
MM3280P10RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280P12RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280P16RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0

MM3280 Series

2023/07/20

MM3280P17RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280P20RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280P21RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280P22RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280P23RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280P25RRE	1.000	8.0	128.0	4.0	24.0	4.00	4.0
MM3280P33RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280PA1RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280PA6RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280PA7RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280PA9RRE	1.000	8.0	24.0	4.0	12.0	4.00	4.0
MM3280S01NRH	1.200	4.0	144.0	4.0	8.0	4.00	
MM3280S02RRE	1.200	4.0	144.0	4.0	8.0	4.00	
MM3280SB9YRE	1.020	16.0	96.0	1.0	12.0	1.00	8.0
MM3280T01NRH	1.000	16.0	20.0	1.0	6.0	1.00	8.0
MM3280T02RRE	1.000	16.0	20.0	1.0	6.0	1.00	8.0
MM3280T03NRH	1.000	16.0	96.0	1.0	96.0	1.00	96.0
MM3280T04NRH	1.000	16.0	96.0	1.0	96.0	1.00	96.0
MM3280W01NRH	1.000	8.0	24.0	4.0	12.0	4.00	8.0
MM3280W06NRH	1.000	8.0	24.0	4.0	12.0	4.00	8.0

Product name	Charging overcurrent release delay time [ms]	Short detection delay time [ms]
MM3280A01RRE	1.0	0.400
MM3280B04RRE	4.0	0.400
MM3280B05RRE	4.0	0.400
MM3280C01RRE	4.0	0.400
MM3280C01NRH	4.0	0.400
MM3280C04RRE	4.0	0.400
MM3280C05RRE	4.0	0.400
MM3280EA1YRE	1.0	0.300
MM3280EA2RRE	1.0	0.300
MM3280EA3YRE	1.0	0.300
MM3280EA4YRE	1.0	0.300
MM3280EA5YRE	1.0	0.300
MM3280EA6YRE	1.0	0.300
MM3280EA7YRE	1.0	0.300
MM3280EA9YRE	1.0	0.250
MM3280EAAYRE	1.0	0.300

MM3280 Series

2023/07/20

MM3280EACNRH	1.0	0.300
MM3280EADYRE	1.0	0.300
MM3280EAFYRE	1.0	0.300
MM3280EAGYRE	1.0	0.300
MM3280EAHYRE	1.0	0.300
MM3280EALYRE	1.0	0.300
MM3280EAMYRE	1.0	0.250
MM3280EANYRE	1.0	0.300
MM3280EASYRE	1.0	0.300
MM3280EATYRE	1.0	0.300
MM3280EAUZYRE	1.0	0.250
MM3280EAVYRE	1.0	0.250
MM3280EAWYRE	1.0	0.300
MM3280EAYYRE	1.0	0.300
MM3280EAZRR4	1.0	0.300
MM3280EB1RRE	1.0	0.300
MM3280EB2YRE	1.0	0.300
MM3280EB3YRE	1.0	0.300
MM3280EB4YRE	1.0	0.300
MM3280EB5YRE	1.0	0.300
MM3280EB6YRE	1.0	0.250
MM3280EB7YRE	1.0	0.300
MM3280EBAYRE	1.0	0.300
MM3280EC3NRH	1.0	0.280
MM3280EC5NRH	1.0	0.280
MM3280EC6NRH	1.0	0.280
MM3280EC7NRH	1.0	0.280
MM3280EG1RRE	0.5	0.300
MM3280EH3RR4	1.0	0.500
MM3280EJ1NRH	1.0	0.320
MM3280EL1NRH	1.0	0.250
MM3280EL4NRH	1.0	0.280
MM3280EL5YRE	1.0	0.300
MM3280EL6YRE	1.0	0.300
MM3280F02RRE		0.400
MM3280G01RRE		0.400
MM3280G02RRE		0.400
MM3280H01NRH		0.400
MM3280H02NRH		0.400

MM3280 Series

2023/07/20

MM3280H03NRH		0.400
MM3280H04NRH		0.400
MM3280H08NRH		0.400
MM3280HA1NRH		0.400
MM3280HA2YRE		0.400
MM3280I01NRH		0.400
MM3280I02NRH		0.400
MM3280J01NRH	1.0	0.300
MM3280J03NRH	1.0	0.300
MM3280J04NRH	1.0	0.300
MM3280J05NRH	1.0	0.300
MM3280J07NRH	1.0	0.300
MM3280J12NRH	1.0	0.300
MM3280J17NRH	1.0	0.300
MM3280J18NRH	1.0	0.300
MM3280JA1YRE	1.0	0.300
MM3280JB1NRH	1.0	0.300
MM3280JB2NRH	1.0	0.300
MM3280JB3NRH	1.0	0.300
MM3280JB5NRH	1.0	0.300
MM3280JB7NRH	1.0	0.300
MM3280JC2YRE	1.0	0.300
MM3280JC3YRE	1.0	0.300
MM3280JD2YRE	1.0	0.300
MM3280JD4YRE	1.0	0.300
MM3280JD5NRH	1.0	0.300
MM3280JF1YRE	1.0	0.300
MM3280JF2YRE	1.0	0.300
MM3280JH1YRE	1.0	0.300
MM3280JH2YRE	1.0	0.300
MM3280JH3YRE	1.0	0.300
MM3280JH4YRE	1.0	0.300
MM3280JH5YRE	1.0	0.300
MM3280JH6NRH	1.0	0.300
MM3280JH7NRH	1.0	0.300
MM3280JH8NRH	1.0	0.320
MM3280JHANRH	1.0	0.300
MM3280JJ1YRE	1.0	0.300
MM3280JL2YRE	1.0	0.250
MM3280JM1YRE	1.0	0.300

MM3280 Series

2023/07/20

MM3280JP1NRH	1.0	0.400
MM3280JP3NRH	1.0	0.400
MM3280JP4NRH	1.0	0.400
MM3280N01YRE	1.0	0.400
MM3280P09RRE	4.0	0.400
MM3280P10RRE	4.0	0.400
MM3280P12RRE	4.0	0.400
MM3280P16RRE	4.0	0.400
MM3280P17RRE	4.0	0.400
MM3280P20RRE	4.0	0.400
MM3280P21RRE	4.0	0.400
MM3280P22RRE	4.0	0.400
MM3280P23RRE	4.0	0.400
MM3280P25RRE	4.0	0.400
MM3280P33RRE	2.0	0.400
MM3280PA1RRE	4.0	0.400
MM3280PA6RRE	4.0	0.400
MM3280PA7RRE	4.0	0.400
MM3280PA9RRE	1.0	0.400
MM3280S01NRH		0.400
MM3280S02RRE		0.400
MM3280SB9YRE	1.0	0.300
MM3280T01NRH	1.0	0.200
MM3280T02RRE	1.0	0.200
MM3280T03NRH	1.0	0.400
MM3280T04NRH	1.0	0.400
MM3280W01NRH	4.0	0.400
MM3280W06NRH	4.0	0.400

Package

[SSON-6E](#)[SSON-6K](#)[SSON-6J](#)[SSON-6M](#)[SSON-6U](#)

MM3280 Series

2023/07/20

SSON-6V

SON-6C

SOT-26A

SOT-26B