



Lilon

LiFePO₄

LTO

Na-ion

PCM for 14S Battery Pack: Programmable for multiple chemistries

SPECIFICATIONS

| Item | Specification | | | | Remark |
|------------------------------------|-------------------------|---------------------|---------------------|--------------------|---------------------------------|
| | MIBMS-14S10A-LNMC-01 | MIBMS-14S10A-LFP-01 | MIBMS-14S10A-LTO-01 | MIBMS-14S10A-NA-01 | |
| 1. General | | | | | |
| Stock Code | 70000-014-LNMC | 70000-014-LFP | 70000-014-LTO | 70000-014-NA | |
| Chemistry | Li-Ion NMC | LiFePO ₄ | Lithium Titanate | Sodium ion | Programmed for 14S |
| Dimensions LxWxH | 72 x 54 x 9.5mm | | | | |
| Weight | 20g | | | | |
| PCB Material | FR4. 2oz Copper | | | | |
| 2. IC & Mosfet | | | | | |
| Protection IC | BQ76952 | | | | |
| Gauge IC | N/A | | | | |
| MosFET | ISC037N12NM6ATMA1(120V) | | | | |
| Power consumption - active mode | <500µA | | | | |
| Power consumption - sleep mode | <100µA | | | | |
| 3. Voltage | | | | | |
| Minimum battery pack voltage | 35V | 28V | 21V | 28V | |
| Nominal battery pack voltage | 50.4V | 44.8V | 32.2V | 42V | |
| Maximum battery pack voltage | 58.8V | 51.1V | 40.6V | 56V | |
| 4. Charge Characteristics | | | | | |
| 4.1 Voltage | | | | | |
| Cell nominal voltage | 3.6V | 3.2V | 2.3V | 3V | |
| Charge voltage | 4.2V/cell | 3.65V/cell | 2.9V/cell | 4V/cell | # |
| Charge over voltage threshold | 4.25V/cell | 3.7V/cell | 2.95V/cell | 4.05V/cell | # |
| Charge over voltage delay time | 2s | | | | # |
| Charge over voltage release | 3.9V/cell | 3.35V/cell | 2.6V/cell | 3.7V/cell | # |
| 2nd charge over voltage | 4.5V/cell | 3.95V/cell | 3.2V/cell | 4.3V/cell | Permanent fail (blows chemfuse) |
| 2nd charge over voltage delay time | 30s | | | | Permanent fail (blows chemfuse) |
| Balancing start voltage | 3.9V/cell | 3.35V/cell | 2.6V/cell | 3.7V/cell | # |
| Balancing start delta voltage | 20mV | | | | # |
| 4.2 Current | | | | | |
| Charge over current threshold | 15A | | | | # |
| Charge over current delay time | 426ms | | | | # |
| Charge over current release | 426ms | | | | # |
| 4.3 Temperature | | | | | |
| Charge over temperature threshold | 50°C ± 3°C | | | | # |
| Charge over temperature release | 45°C ± 3°C | | | | # |
| Charge under temperature threshold | 0°C ± 3°C | | | | # |
| Charge under temperature release | 5°C ± 3°C | | | | # |
| Temperature protection delay time | 2s | | | | # |





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| 5. Discharge Characteristics | | | | | |
| 5.1 Voltage | | | | | |
| Discharge under voltage threshold | 2.5V/cell | 2V/cell | 1.5V/cell | 2V/cell | # |
| Discharge under voltage delay time | 2s | | | | # |
| Discharge under voltage release | 2.7V/cell | 2.5V/cell | 1.9V/cell | 2.5V/cell | # |
| 5.2 Current | | | | | |
| Discharge over current threshold | 18A | | | | # |
| Discharge over current delay time | 10s | | | | # |
| Discharge over current release | 0A-10s | | | | # |
| 5.3 Temperature | | | | | |
| Discharge over temperature threshold | 60°C ± 3°C | | | | # |
| Discharge over temperature release | 50°C ± 3°C | | | | # |
| Discharge under temperature threshold | -10°C ± 3°C | | | | # |
| Discharge under temperature release | 0°C ± 3°C | | | | # |
| Temperature protection delay time | 2s | | | | # |
| 6. Maximum Current | | | | | |
| Max continuous charge / discharge current | At 25°C: 13A At 45°C: 10A | | | | |
| 7. Short Circuit | | | | | |
| Short Circuit threshold | 20A | | | | # |
| Short Circuit delay time | 330µs ± 15µs | | | | # |
| Short Circuit release | Load disconnect | | | | # |
| 8. Maximum Temperature | | | | | |
| Chemfuse max temperature | 65°C | | | | |
| 9. Polarity | | | | | |
| Reverse polarity protection | No | | | | |

indicates factory adjustable





ENEPOWER

MIBMS-14S10A series

Protection Circuit Module (PCM)

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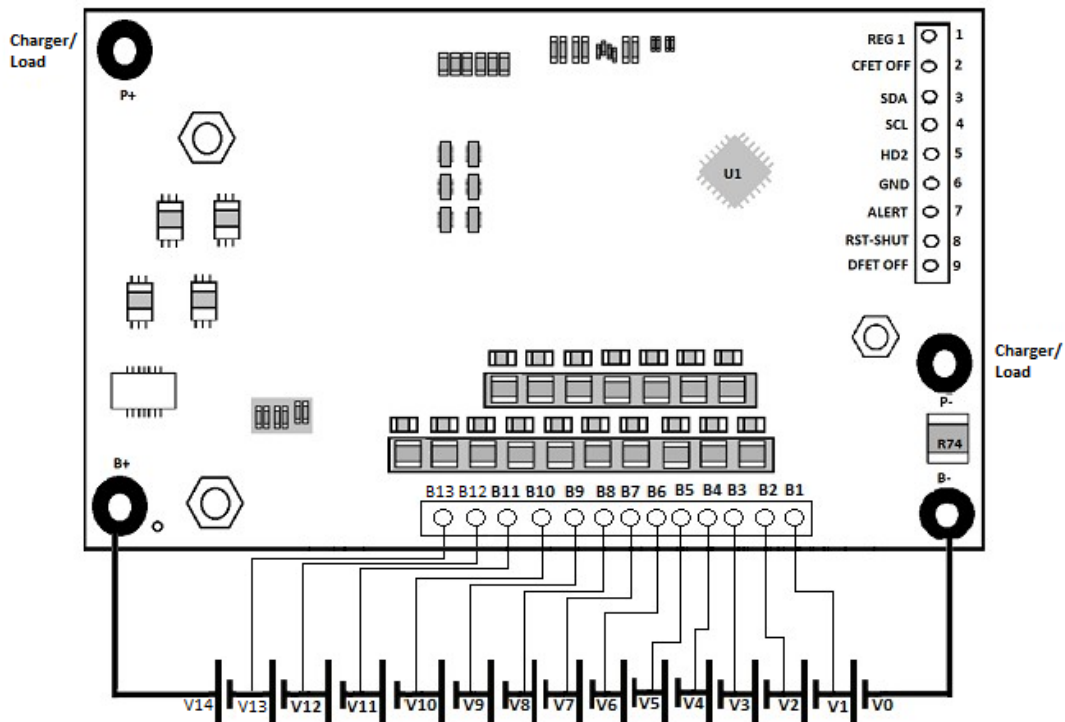
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IMAGE

CONNECTION DIAGRAM



BQ76952 Connection Diagram

