

| BMS battery management system for lithium rechargeable battery pack | | | |
|---|---------------------------|--|--------------------------|
| Model: LIBRA8S2P150LP LOW POWER | | | |
| Electrical Characteristics | | | |
| No. | Test item | | Criterion |
| 1 | Type of cells | Type | All rechargeable lithium |
| | | Number of cells | 2*(5÷8) |
| | | Range voltage for singol cell | 1,5÷4,5 VDC |
| | | Cells in series | yes -8- |
| | | Cells in parallel | yes -2- |
| 2 | Voltage | Range min/max | 7÷36 VDC |
| | | Minimum voltage measured | 1 mV |
| 3 | Current | Low Current consumption for single cell with auxiliary charger | ≤50 nA |
| | | Maximal continuous charging current | 20 A |
| | | Maximal continuous discharging current | 60 A |
| | | Minimum measured current | 10 mA |
| 4 | Balance | Type of Balance | Passive |
| | | Number of balance | three type (A,B,C) |
| | | Minimun balance voltage for single cell | 1 mV |
| | | Balance current for single cell | 150 mA |
| 5 | Over charge Protection | Over charge detection voltage | settable ±1mV |
| | | Over charge release voltage | settable ±1mV |
| 6 | Over discharge protection | Over discharge detection voltage | settable ±1mV |
| | | Over discharge release voltage | settable ±1mV |
| 7 | Over current protection | Over discharge detection current | settable ±1A |
| | | Detection delay time | settable ±1s |
| 8 | Temperature | Battery temperature misure | settable ±1°C |
| | | PCB temperature misure | settable ±1°C |
| 9 | Time | Real time clock with back-up battery | yes |
| | | auto powe off | settable ≥1min |
| 10 | Comunication | USB | yes |
| | | I2C | yes |
| | | PWM opto isolated | yes |
| | | TX opto isolated | yes |
| 11 | Parameters of the BMS | Settable by PC | yes |
| 12 | Software of comunication | windows support | yes |

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Memory internal of the BMS

| No. | Test item | | Criterion |
|-----|---------------------|-------------------------|---------------|
| 1 | Time | Day last charge | yes |
| | | Data of last charge | yes |
| | | Charge cycles | yes |
| 2 | Current | Register of Amper/hours | yes |
| 3 | Operation data | Internal register | 10 parameters |
| 4 | Production data | Internal register | 4 parameters |
| 5 | Historical log data | Register fifo | 64 events |

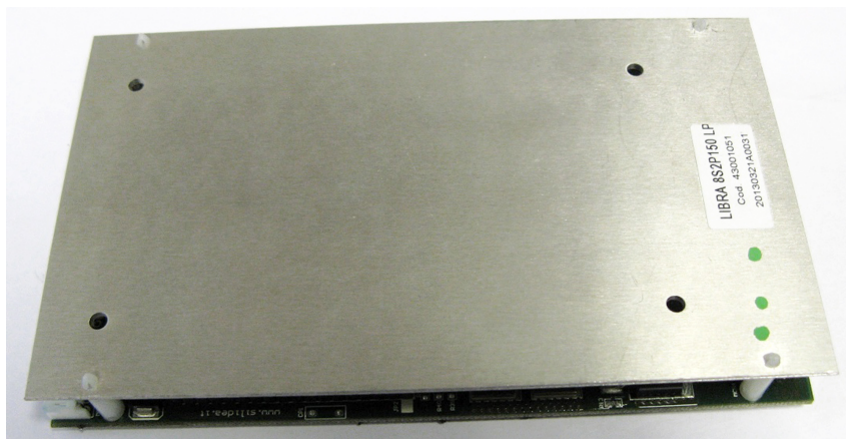
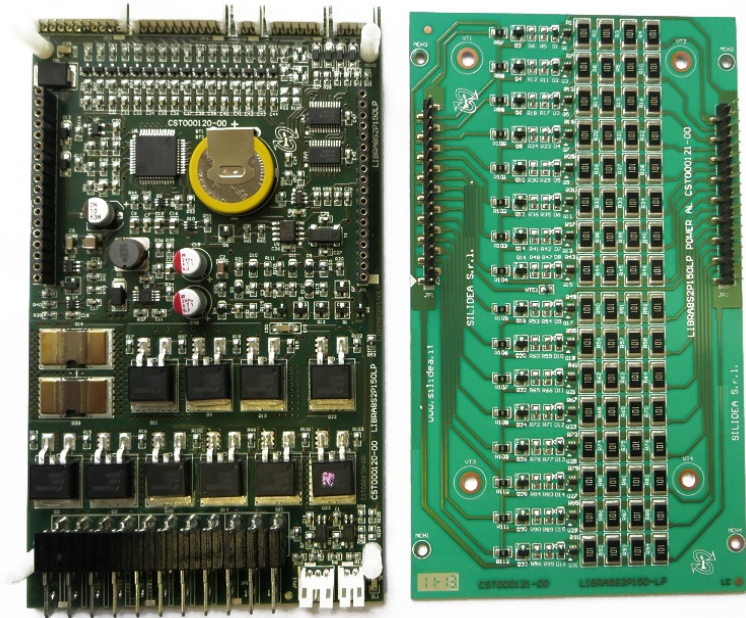
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Electrical and Mechanical Characteristics

| No. | Test item | | Criterion |
|-----|-------------------|------------------------------|------------------|
| 1 | Type of core | Micro Controller | 16 bit |
| 2 | Misure current | Analog-to-Digital Converters | 16 bit |
| 3 | Misure Voltage | Analog-to-Digital Converters | 16 bit |
| 4 | Power regulator | Switching Regulators | higt efficenze |
| 5 | ON/OFF | Double push button | yes |
| 6 | Efficiency | At maximun power | 99,98% |
| 7 | Led | State views | discharge/charge |
| 8 | Power consumption | Stand By State | ≤50 nA |
| 9 | Power consumption | ON State | ≤10 mA |
| 10 | PCB 1 | Command | FR4 |
| 11 | PCB 2 | Power | Alluminium |
| 12 | Weight | Measure | 160 gr |
| 13 | Dimension | Measure | 145*85*18 mm |
| 14 | Temperature | Operating Temperature Range | -20, +70 °C |
| | | Storage Temperature Range | -20, +85 °C |

Photo of the product:

Developed by Silidea
www.silidea.com