

1. Specification

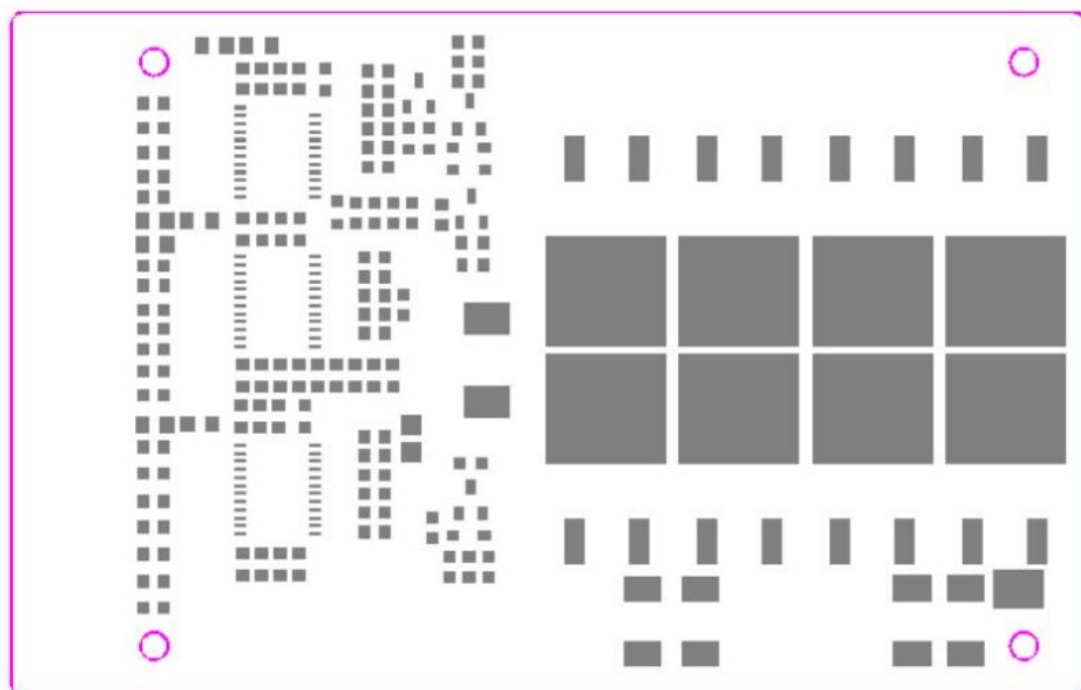
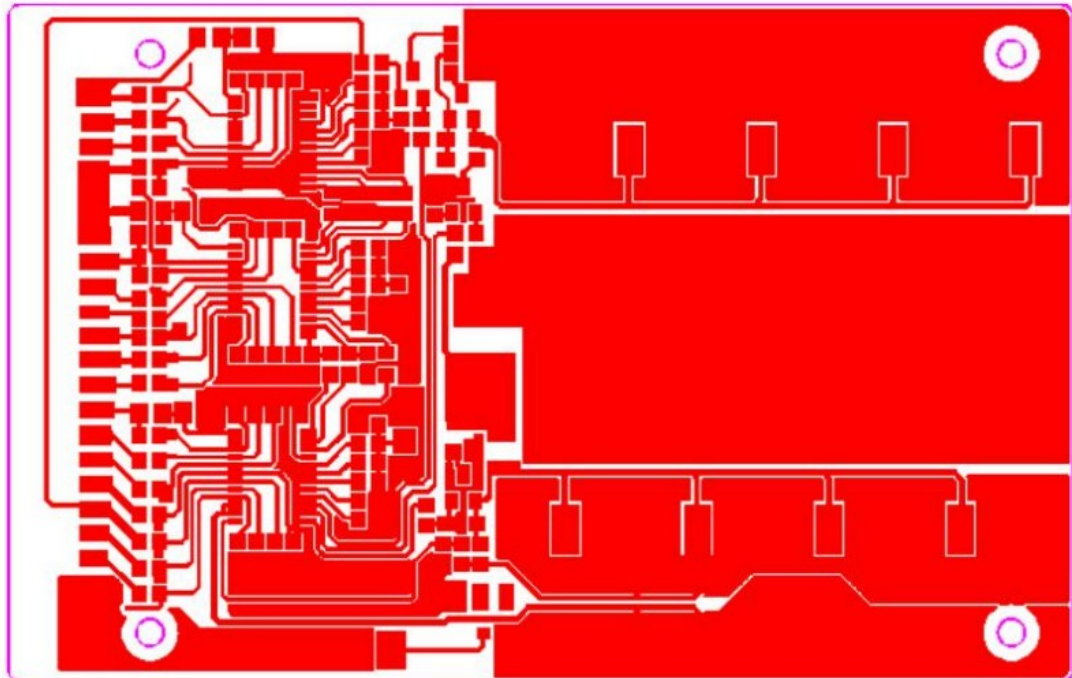
Applicable to ternary 13 serial port 50A products

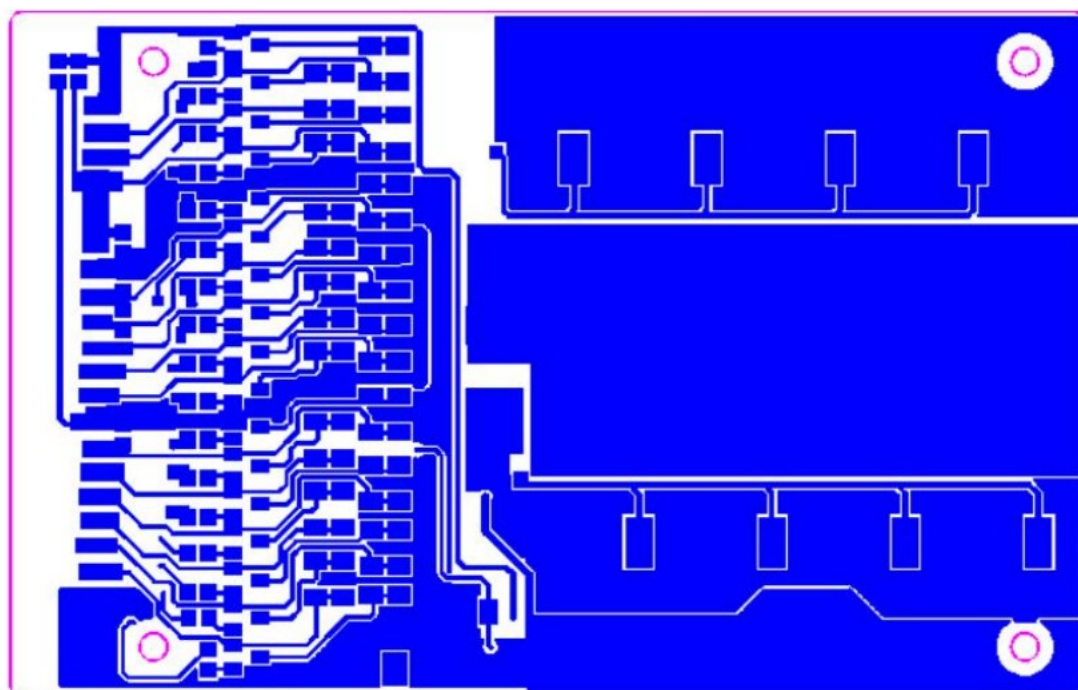
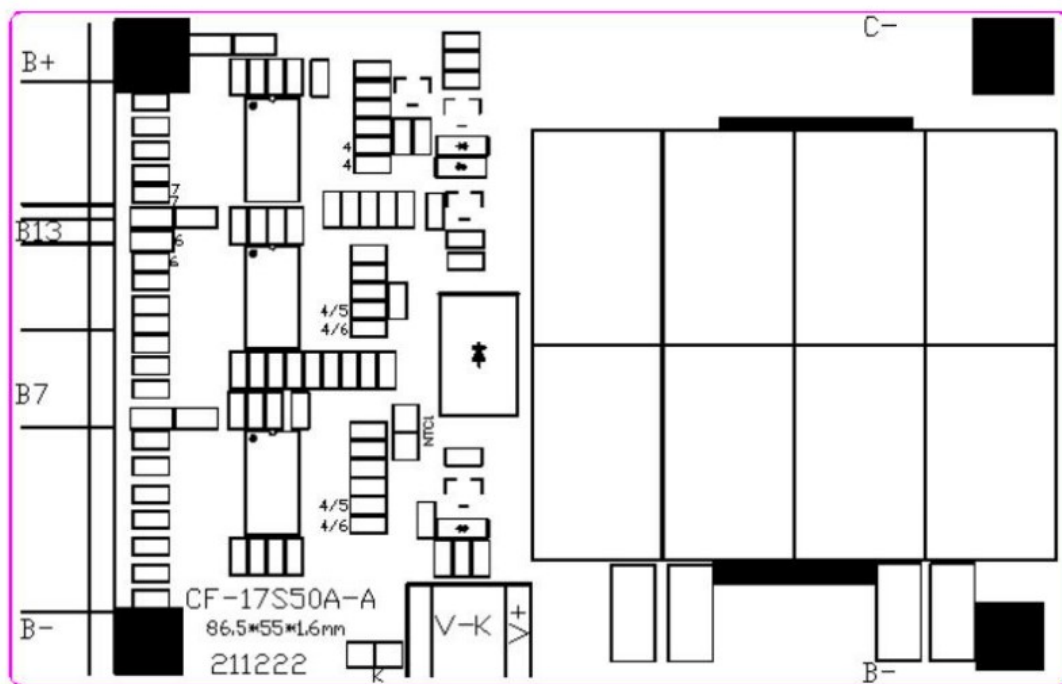
2. Electrical Characteristics

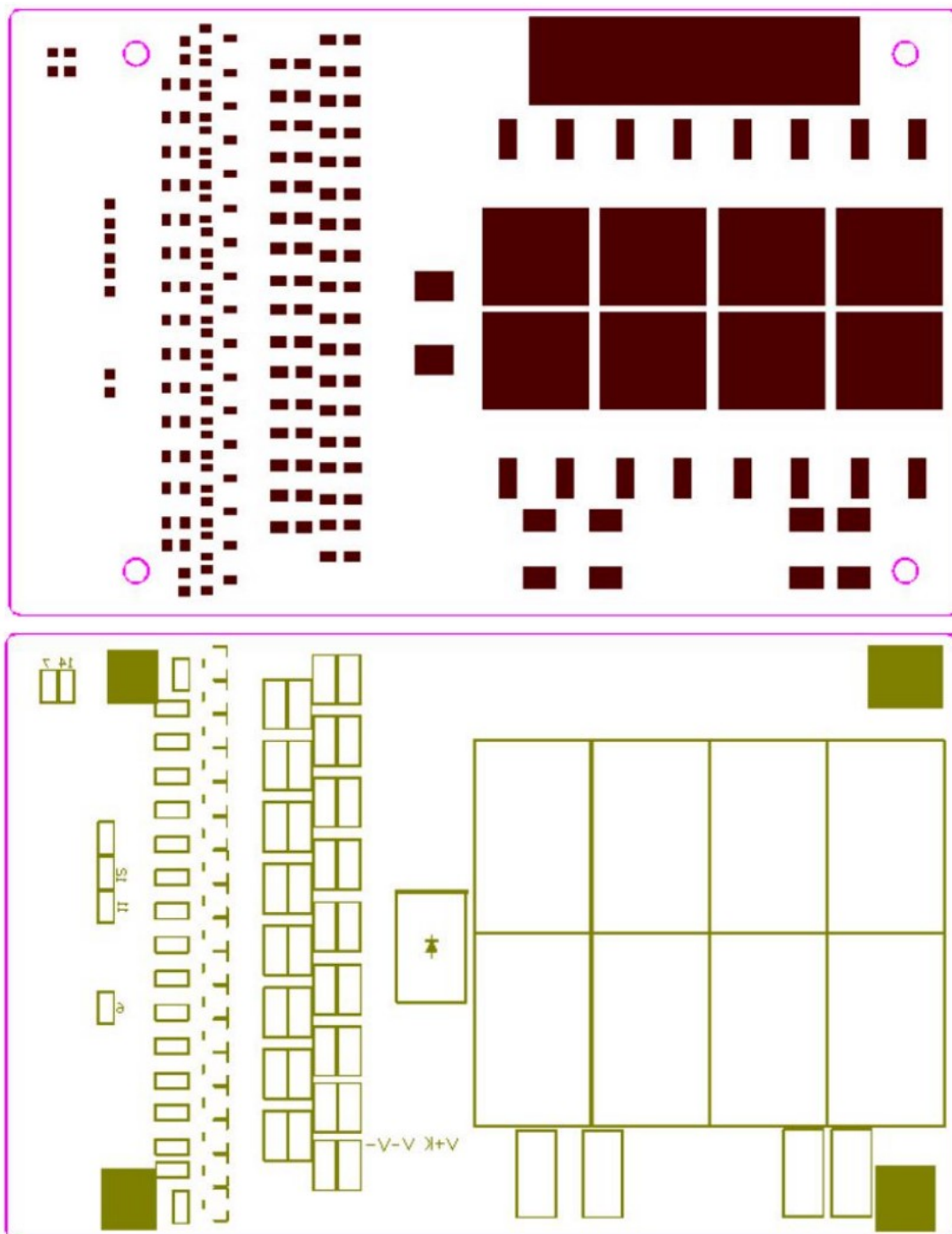
	Details	Specification	Unit	Remark
Discharge	Continuous discharge current	< 50.0	A	
Charging	Continuous charging current	< 20.0	A	
Overcharge protection	Single cell overcharge detection voltage	4.25 ± 0.025	V	
	Overcharge protection delay	1000 ± 500	mS	
	Overcharge release voltage	4.15 ± 0.05	V	
Charge equalization	Single-cell charge balance detection voltage	4.15 ± 0.025	V	
	Single-cell charge equalization current	42 ± 5	mA	
Over discharge protection	Single cell overdischarge detection voltage	2.75 ± 0.1	V	
	Overdischarge detection delay	1000 ± 500	mS	
	Overdischarge release voltage	3.0 ± 0.1	V	
overcurrent protection	Overcurrent detection voltage	50 ± 15	mV	
	Overcurrent detection delay	1000 ± 500	mS	
	Overcurrent protection current	160 ± 20	A	
	Overcurrent protection release conditions	Disconnect the load		
temperature protection	temperature protection	/	°C	
Internal resistance	Main circuit conduction internal resistance	≤ 20	mΩ	
self-consumption	Working current	≤ 40	uA	
	Sleep current (when	≤ 10	uA	

	the battery is over-discharged)			
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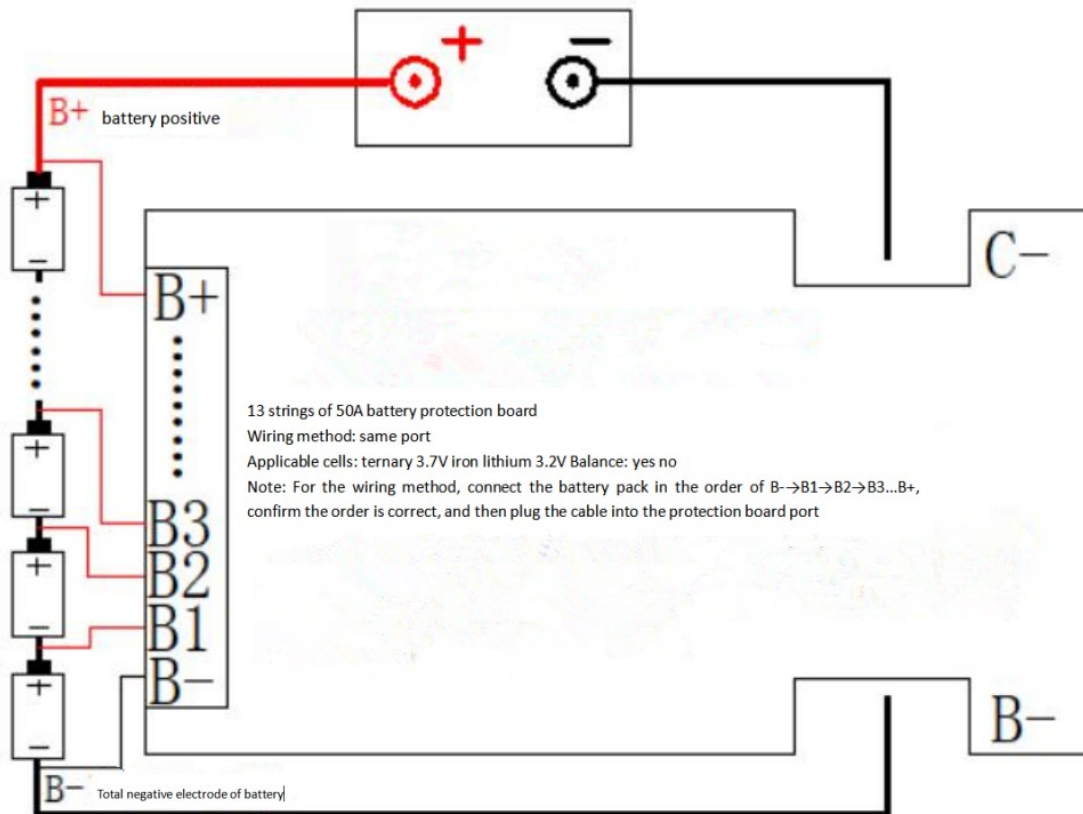
3. PCB circuit diagram







4. Protection board wiring diagram



Same interface:

Positive pole of battery pack

B+: Positive pole for charging and discharging.

B-: The total negative pole of the battery pack. .

C-: as the negative electrode for charging and the negative electrode for discharging.

5. PCM size: Length 86.5 ± 0.2 * width 55.0 ± 0.15 * thickness 16.0 ± 1.0 mm.

6. Special notes on the protection board

Wiring operation:

1) The cable starts from the thin black wire connected to B-, the second wire is connected to the positive electrode of the first string of batteries, and the positive electrode of each string of batteries is connected in turn; then insert the cable into the protection board;

2) The wiring is completed. Then, measure whether the voltages of B+ and B- of the battery are the same as those of P+ and P-. The same means that the protection board is working normally; otherwise, please re-operate according to the above;

3) The total negative electrode of the cell is welded to the B-soldering point of the protection board;

4) When removing the protection board, first pull out the cable (if there are two cables, first pull

out the high-voltage cable, then pull out the low-voltage cable), and then remove the Power line B-.

7. Matters needing attention

- 1) The protection boards of different voltage platforms cannot be mixed, for example, the ternary protection board cannot be used on iron-lithium batteries;
- 2) The cables of different manufacturers are not common, please make sure to use our company's matching cables;
- 3) During testing, installation, contact When using the protection board, take measures to discharge static electricity;
- 4) Do not let the heat dissipation surface of the protection board directly contact the battery cell, otherwise the heat will be transmitted to the battery core and affect the safety of the battery;
- 5) Do not disassemble or change the protection board element by yourself
- 6) If the protection board is abnormal, please stop using it and use it after the problem is solved;
- 7) Do not use two protection boards in series or in parallel