

深圳市拓达通电子有限公司

原材料承认书

SPECIFICATION FOR APPROVAL

客户名称/ customer name	
产品型号/ Model	TDT-8389-6S-20A NMC
产品规格/ Specification	L63*W52*T9.5mm
主要器件 Main configuration	IC: HY2113FB2B/SOT23-6 MOS: 4080E/TO-263
PCB工艺/PCB	Double layer, Green oil, Solder coating, ROHS
Document NO.	
版本/ Rev	00

部门 Department	编写(R&D) Registered	审核 (R&D) Checked	复核 (Quality) Deliberation	批准(R&D) Approved
签名/ Sign				
日期/ DATE				

客户确认 Customer Approve			
部门 Department	R&D	Quality	Approved
签名/ Sign			
日期/ DATE			
文件有效期限 Approved date	有限期限为 1 年 Period of validity 1 year		

在文件到期前一个月如果双方都对此文件都没有异议，此文件将自动延续有效期1年

If both sides have no dissidence in one month before the maturity of the Approved. It will be considered valid automatically for a one year period.

公司名称 Company Name	深圳市拓达通电子有限公司 SHENZHEN TUODATONG ELECTRONICS CO., LTD	电话 TEL	15013560873
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1. 产品变更履历/Product Modified Record List

产品变更履历/ Product Modified Record List			
日期/ Date	变更点描述/ Problem and Solution	责任人/ Principal	
2021-8-11	1. 新开发		

2. 产品规格/ Produce Specification

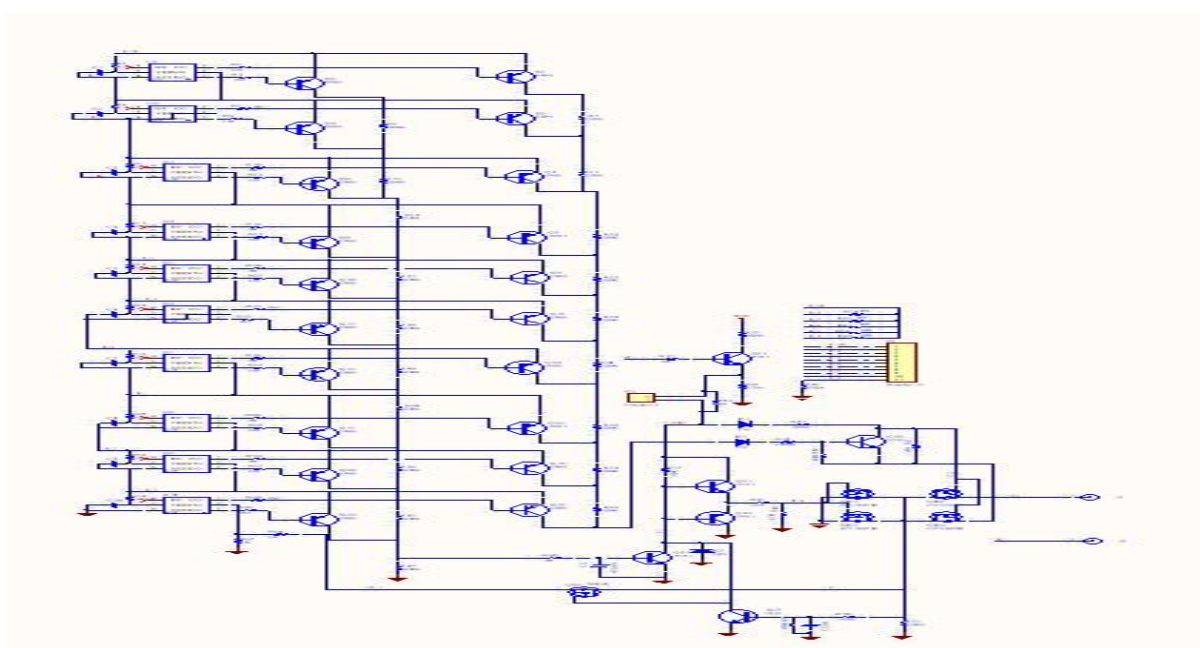
	技术规范 TECHNICAL SPECIFICATION FOR APPROVAL	Rev	0.1
		Date	
		Page	1

No	Item	Condition	Specification
1	输入电压/input Voltage	B+/B-间输入电压/input Voltage B+ to B-	-0.3~+25.25(6S NCM)
2	过充电 Overcharge	保护电压/Detection voltage/1CELL	4.25±0.05V
3		恢复电压/ Release voltage/1CELL	4.05±0.1V
4		保护延迟时间/ Detection delay time	0.5~1.5S
5	过放电 Over discharge	保护电压/Detection voltage/1CELL	2.5±0.1V
6		恢复电压/ Release voltage/1CELL	2.8±0.1V
7		保护延迟时间/ Detection delay time	100~160ms
8	放电过流 Over discharge current	放电过流保护电流/Over current	60-80A
9		放电过流保护延时/delay time	5~20ms
10	短路保护 Short detection	短路保护延时/ Short detection delay time	150~350us
11		恢复条件/Release Conditions	断开负载/Cut off load
12	充电温度保护 Charge temperature protection	充电时的温度保护阈值/ Charge temperature protection	75±10℃
13	放电温度保护 Discharge temperature protection	放电时的温度保护阈值/ Discharge temperature protection	75±10℃
14	自耗电 Normal current consumption	工作状态自耗电 Normal current consumption of PCM	Max 80.00uA
15	0V 充电/0V charger	是否允许 0V 充电/allowed 0V change	YES
16	建议工作条件 Suggest working conditions	建议最大持续充/放电电流 max continuous charge/discharge current	20A/20A
17		建议工作温度/suggest working temperature	-20℃~+60℃
	平衡电压	Balance voltage	4.19±0.1V
	平衡电流	Balance current	30-50MA
18	内阻/IR resistance	PCM 内阻/ IR of PCM	≤35.00 mΩ
19	NTC阻值	NTC 阻值(20~40)℃	无
20	PCM 尺寸	长度/The length of final PCM	63±0.15mm

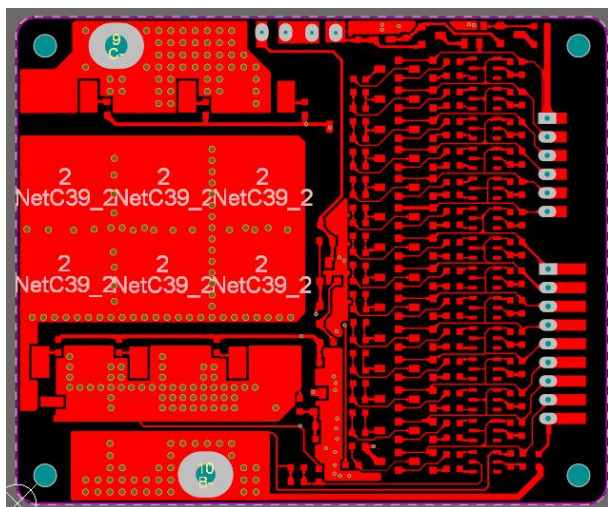
21	The size of final PCM	宽度/The width of final PCM	52±0.1mm
22		厚度/ The thickness of final PCM	MAX:9.5mm
21	外观 Appearance	1) 没有元器件的破损/Nothing part deflection 2) 所有焊点良好/The status of solder is all right 3) PCM 没有翘曲/ PCM will not crook 4) 符合拓通达的出货外观标准 Settle for TDT Module appearance standard	
22	可靠性测试 Reliability test	1) ESD 测试: 接触 4KV 空气 8KV / ESD test : contact 4KV Air 8KV	

3. 图纸/Drawing

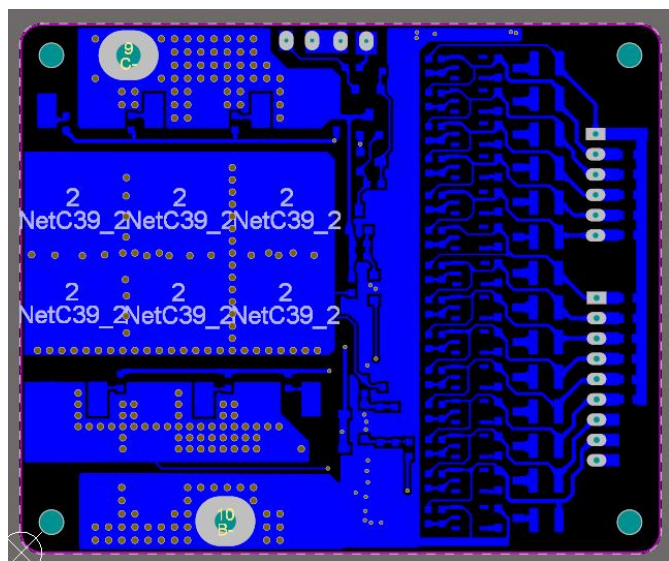
3.1 电气原理图/Circuit Drawing



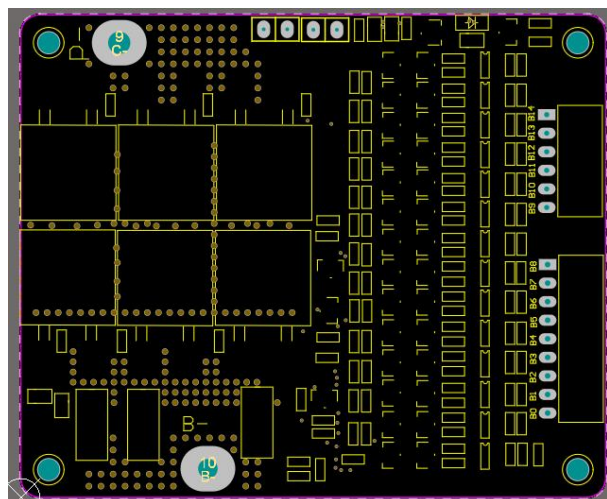
3.2 顶层线路图/Top Layer



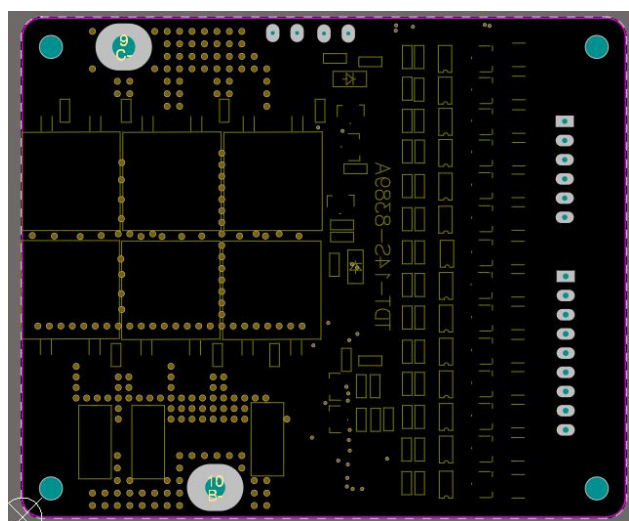
3.3 底层线路图/Bottom Layer



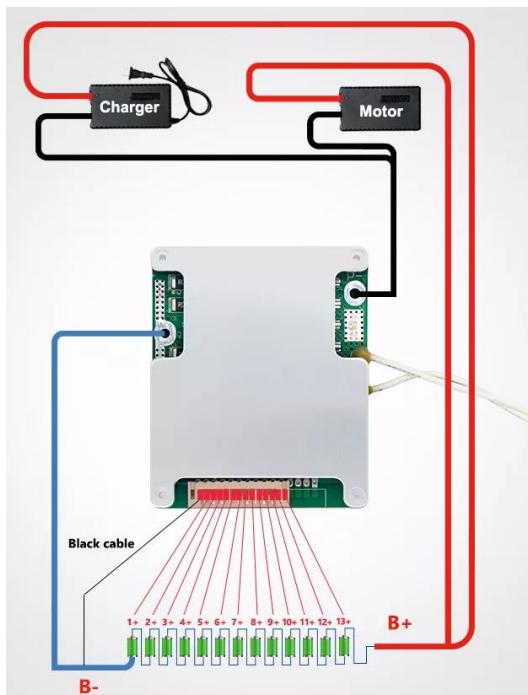
3.4 顶层丝印图/Top Overlay



3.5 底层丝印图/Bottom Overlay



4. 接线说明/Wiring instructions



Cable:

B0 connect battery cell's B0/B1- 0V
B1 connect battery cell's B1+/B2- 3.7V
B2 connect battery cell's B2+ 7.4V
B3 connect battery cell's B3+ 11.1V
B4 connect battery cell's B4+ 14.8V
B5 connect battery cell's B5+ 18.5V
B6 connect battery cell's B6+ 22.2V

Power lines:

B- connect battery's B-, wire current>20A 1 line
P- connect charger-/load-, wire current>20A 1 line
P+ connect battery's B6+, wire current>20A 1 line