

# 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/ <b>customer name</b>	
产品型号/ <b>Model</b>	TDT-4S-8181A 10A LFP
产品规格/ <b>Specification</b>	L60*W50*T4.5mm MAX
主要器件 <b>Main configuration</b>	IC: CM1041-GT/TSSOP-16 MOS: 3080K
<b>PCB工艺/PCB</b>	Double layer, Green oil, Solder coating, ROHS
<b>Document NO.</b>	
版本/ <b>Rev</b>	00

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

<b>客户确认</b> <b>Customer Approve</b>			
<b>部门</b> <b>Department</b>	R&D	Quality	Approved
<b>签名/Sign</b>			
<b>日期/DATE</b>			
<b>文件有效期限</b> <b>Approved date</b>	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.

<b>公司名称</b> <b>Company Name</b>	深圳市拓达通电子有限公司 SHENZHEN TUODATONG ELECTRONICS CO., LTD	电话 TEL	15013560873
<b>公司地址</b> <b>Address</b>	深圳市光明区白花社区白花洞博林泰科技园7楼 7/F, Bo Lin Tai Technology Park, Baihuadong, Guangming District, Shenzhen, Guangdong Province, China.		

# 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
2020-9-10	1. 新开发	

## 2. 产品规格 / Produce Specification

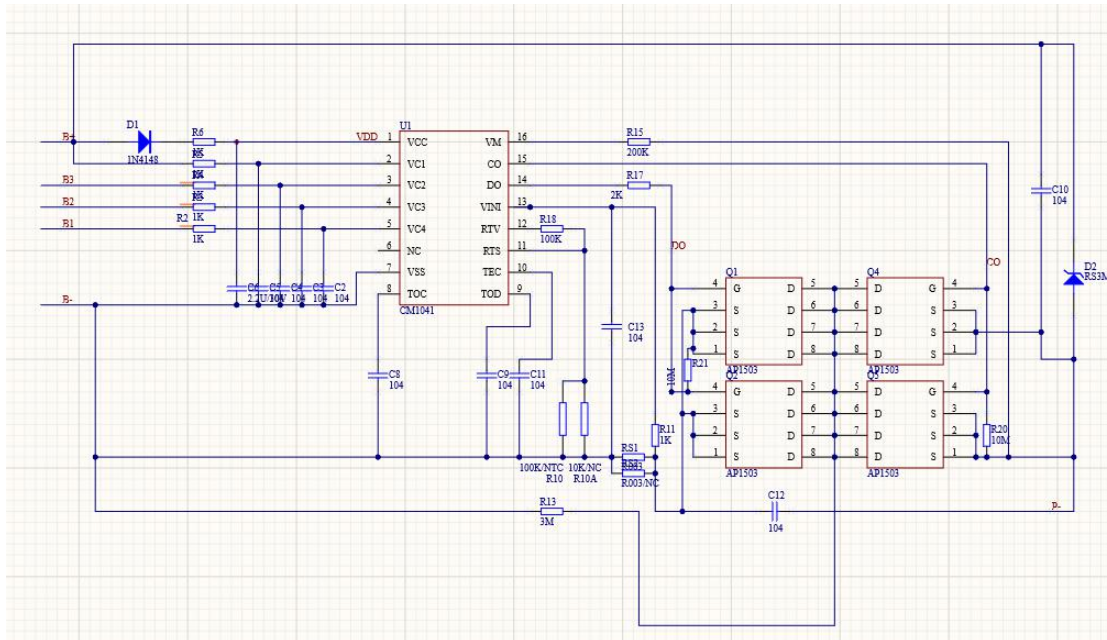
	技术规范 TECHNICAL SPECIFICATION FOR APPROVAL	Rev	0.1
		Date	
		Page	1

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~+15V
2	过充电 Overcharge	保护电压/Detection voltage/1CELL	3.65±0.05V
3		恢复电压/ Release voltage/1CELL	3.48±0.1V
4		保护延迟时间/ Detection delay time	0.8~1.6S
5	过放电 Over discharge	保护电压/Detection voltage/1CELL	2.32±0.1V
6		恢复电压/ Release voltage/1CELL	2.58±0.1V
7		保护延迟时间/ Detection delay time	800~1400.00ms
8	放电过流 Over discharge current	放电过流保护电流/Over current	20~30A
9		放电过流保护延时/delay time	800~1200ms
10	短路保护 Short detection	短路保护延时/ Short detection delay time	100~350us
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	0℃~+50℃
13	放电温度保护 Discharge temperature protection	放电时的温度保护阈值/ Discharge temperature protection	65℃~+75℃
14	自耗电 Normal current consumption	工作状态自耗电 Normal current consumption of PCM	Max 60.00uA
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	10A/10A
17		建议工作温度/suggest working temperature	-20℃~+60℃
18	均衡开启电压	Balance voltage	3.60V
	均衡电流	Balance current	30-50mA
19	内阻/IR resistance	PCM 内阻/ IR of PCM	≤30.00 mΩ
20	NTC阻值	NTC 阻值(20~40)℃	NO
21	PCM 尺寸 The size of final PCM	长度/The length of final PCM	60±0.15mm
22		宽度/The width of final PCM	50±0.1mm

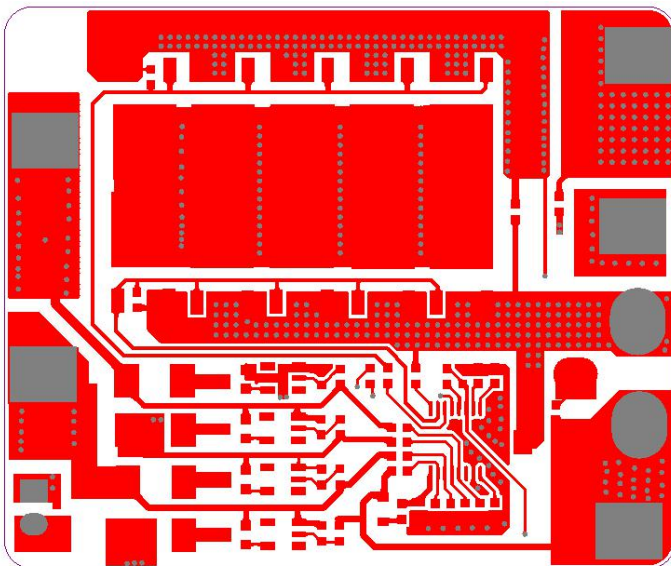
23		厚度/ The thickness of final PCM	MAX:4.5mm
24	外观 Appearance	1) 没有元器件的破损/Nothing part deflection 2) 所有焊点良好/The status of solder is all right 3) PCM 没有翘曲/ PCM will not crook 4) 符合拓通达的出货外观标准 Settle for TDT Module appearance standard	
25	可靠性测试 Reliability test	1) ESD 测试: 接触 4KV 空气 8KV / ESD test : contact 4KV Air 8KV	

# 3. 图纸/Drawing

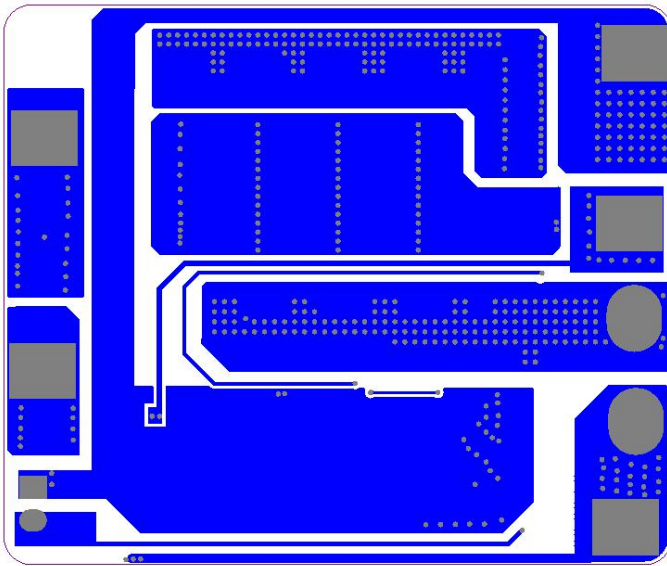
## 3.1 电气原理图/Circuit Drawing



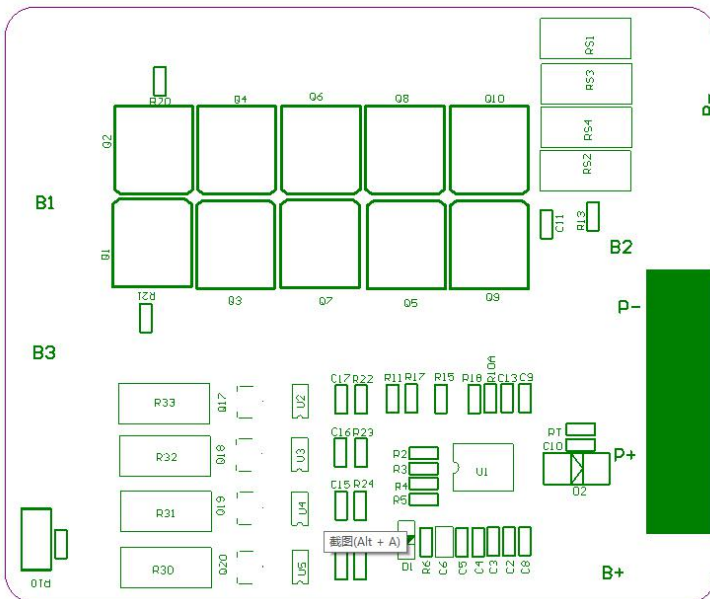
## 3.2 顶层线路图/Top Layer



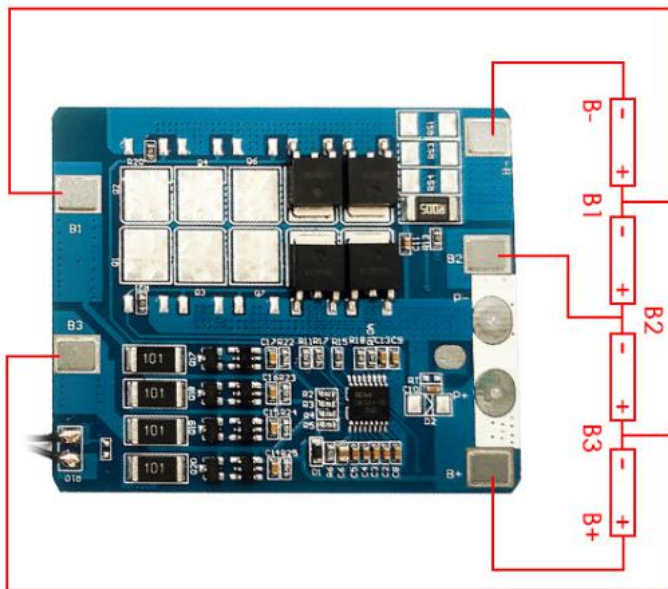
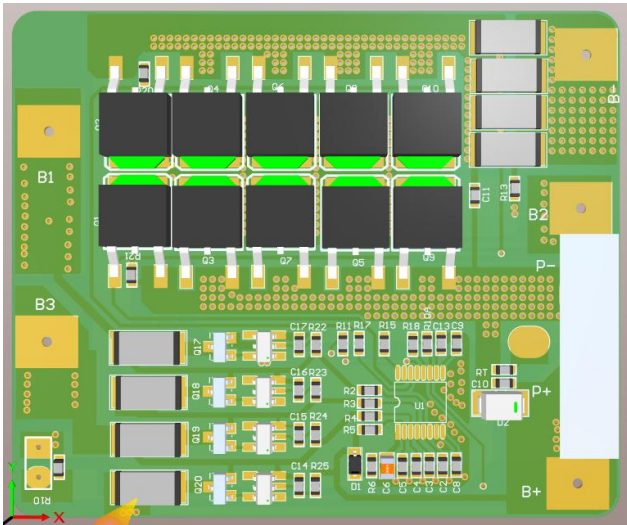
### 3.3 底层线路图/Bottom Layer



### 3.4 顶层丝印图/Top Overlay



## 4. Wiring instructions



- B- connect battery's B- 0V
- B1 connect battery cell's B1+/B2- 3.2V
- B2 connect battery cell's B2+/B3- 6.4V
- B3 connect battery cell's B3+ 9.6V
- B+ connect battery's B4+ 12.8V

- P+ connect load+/charger+
- P- connect load-/charger-