
连兴旺电子(深圳)有限公司

承认书

SPECIFICATIONS FOR APPROVAL

客户:

Customer: _____

客户料号:

Customer Part No: _____

公司料号:

Part No:

BMAxxB-E1A

产品名称:

Description:

TACT SWITCH

发行日期:

Issue Date: _____

客户签核 (Customer Approval) :

采购	品保	工程

内部签核 (Signature) :

核准	审核	制作
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APPROVAL SPECIFICATIONS

Product name	P/N	Verszion	Document No.	Page
TACT SWITCH	BMAxxB-E1A	A/00		2 /7

变更履历表:

[illegible]

1、概述

GENERAL

1.1 工作温度范围

Operating Temperature Range

-30℃~80℃ (在标准大气压、标准湿度条件下)

-30℃~80℃ (Normal humidity, normal air pressure)

1.2 贮藏温度范围

Storage Temperature Range

-40℃~80℃ (在标准大气压、标准湿度条件下)

-40℃~80℃ (Normal humidity, normal air pressure)

1.3 测试条件

Test Conditions

在没有其它特定的条件下, 应该在以下的条件下进行测试和测量:

Unless otherwise specified, tests and measurement shall be made in the following standard conditions:

常温.....5℃~35℃

Normal temperature.....5℃~35℃

标准湿度.....相对湿度 25%~85%

Normal humidity.....relative humidity 25%~85%

标准大气压.....86Kpa~106Kpa

Normal air pressure.....86Kpa~106Kpa

在制造过程中, 测试和测量应该在以下的条件下进行:

If any doubt arise from the judgment, tests shall be conducted at the following conditions:

温度.....20℃±2℃

Temperature.....20℃±2℃

相对湿度.....65%±5%

Relative humidity.....65%±5%

环境气压.....86Kpa~106Kpa

Air pressure.....86Kpa~106Kpa

1.4 存储方法

Storage method

1. 使用前确保包装完整无破损, 无浸湿.

Ensure that the product without package breaking or wetting before use.

2. 存储条件 Storage conditions:

储存温度 Storage temperature: -5 ~ 35 C;

储存湿度 Storage humidity: 25% ~80%;

未开封状态: 6 个月内使用完毕 (从发货日开始计算); 超过 6 个月后再使用的, 使用前请先验证: 端脚无氧化、无发黑、塑料件无吸湿起泡, 确保焊接的适宜性;

Unopened status: Use up the product as soon as possible before 6 months. (calculated from shipment date). Over 6 months, please make sure below before use it: terminal without oxidation or blackening, plastic parts without moisture absorption or bubble, ensure solderability.

已开封状态: 1 个月内使用完毕;

Opened status: use up within 1 month;

储存注意事项: 避开高湿高温和有腐蚀性气体的环境及阳光直射;

Storage precautions: Please avoid the following environment: with high humidity, high temperature, corrosive gases and direct sunlight.

3. 请勿超重叠放.

Do not stack too many switches.

2、详细说明

Detailed specification

2.1 外观: 应无影响、降低产品性能的缺陷;

Appearance: There should be no defects that affect the serviceability of product.

2.2 结构尺寸和安装尺寸: 应符合装配图要求;

Style and dimension: shall conform to the assemble drawings.

2.3 操作形式: 有触觉反应的操作

Type of actuating: Tactile feedback.

2.4 开关结构: 单回路单输出 (具体的触点结构在装配图中已绘出);

Contact arrangement: 1 pole, 1 throw

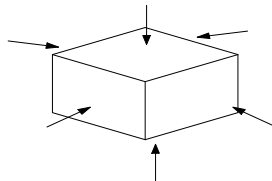
(Details of contact arrangement are given in the assembly drawings.)

2.5 开关工作额定值: DC 24V 25mA (常切换最大值) DC 1V 10μA (最小值)

DC 50V 100mA (不常切换最大值) DC 1V 10μA (最小值)

Ratings: DC 24V 25mA (Max) DC 1V 10μA (Min)

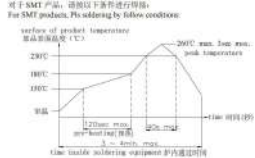
3. 电气性能: ELECTRICAL SPECIFICATION			
		试 验 条 件 TEST CONDITIONS	要求 REQUIREMENTS
3.1	接触电阻 Contact Resistance	在 1KHz 微小电流(100mA)以下测试。 Measured at 1KHz small current(100mA or less)	$\leq 50m\Omega$
3.2	绝缘电阻 Insulation Resistance	在端子之间施加 AC 250V /min 的条件下,测量端子之间底座、盖板的电阻值 Measurement shall be made following application of 250V DC potential, across terminals, and across terminals and cover, for one minute.	$\geq 100M\Omega$
3.3	介质耐压 Dielectric voltage proof	在相互绝缘的所有接线端子之间 250V (50~60Hz 电流为 10mA)交流电,各接线端子与外壳或非载流金属零件之间加载 250V (50~60Hz) 交流电,持续时间 5S。 250VAC (50~60Hz, cut-off current 10mA) is applied between non-connected terminals and between terminals and the metal frame for 5 s.	无击穿、无飞弧 There should be no breakdown and flashover
3.4	极间电容 Capacitance between adjacent switches	频率为 1MHz $\pm$ 10KHz 适用于相邻排脚和电路 To be measured with frequency 1MHz $\pm$ 10KHz, applied between adjacent terminal and circuit	最大 5PF Max 5PF
4. 机械性能: MECHANICAL SPECIFICATION			
4.1	操作力 Operating Force	应用于操作方向。 Applied in the direction of operation.	1000gf (MAX)
4.2	端子强度 Terminal strength	在排脚前端任意一个方向加 500gf 力度测试,时间为 1 分钟。 A static load of 500gf shall be applied To the terminal for 1 minute, in any direction	在排脚中没有裂开. 松动等异常, 满足于机械、电器性能。 Electrical characteristics shall be satisfied without damage or excessive looseness of terminals.
4.3	操作部强度 Operating unit strength	以 1Kgf 的静态荷重施于操作方向测定, 操作时间 15S The static load of 1Kgf was applied to the operation direction and the operation time was 15S .	在排脚中没有裂开. 松动等异常, 满足于机械、电器性能。 Electrical characteristics shall be satisfied without damage or excessive looseness of terminals.
4.4	振动 Vibration	根据以下给定条件进行测试: Measurement shall be made following the test set forth below: (1) 振动频率范围: 10~55~10Hz Vibration frequency range: 10 to 55 to 10Hz (2) 振幅 (峰-峰): 1.5mm Amplitude: 1.5mm (3) 振动方向: 包括手柄行程方向在内的三个相互垂直的方向 Direction of vibration: Three mutually perpendicular direction including the direction of stem travel (4) 测试时间: 每次 2 小时 Duration: Each 2 hours.	Item 3 Item 4.1 Item 4.2
4.5	冲击 Shock	根据下列条件进行冲击试验 Test by following conditions (1) 安装方法: 正常安装 (1) installation method: normal (2) 加速度: 784m/s ² (2) Acceleration: 784m/s ² (3) 作用时间: 11ms (3) Acting time: 11ms (4) 测试方向: 6 个方向 冲击次数: 每个方向 3 次, 共计 18 次 (4) Test direction: 6 directions Times: 3 times/direction , total 18 times	Item 3 Item 4.1 Item 4.2



5、环境耐久性： ENVIRONMENTAL SPECIFICATION		
项目 ITEM		要求 REQUIREMENTS
5.1	低温测试 Resistance to low temperature	Item3 Item4.1 Item4.2
5.2	高温测试 Heat resistance	Item3 Item4.1 Item4.2
5.3	温度周期性测试 Change of temperature	Item3 Item4.1 Item4.2
5.4	湿温测试 Moisture resistance	Item3.3 Item3.4 Item4.1 Item4.2
5.5	硫化试验 Sulfuration resistance	Item3.3 Item3.4 Item4.1 Item4.2

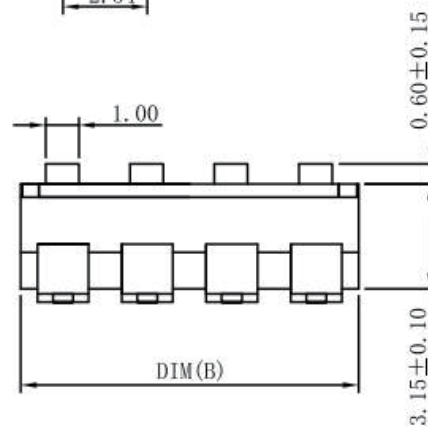
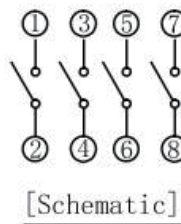
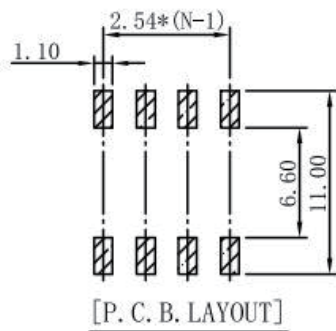
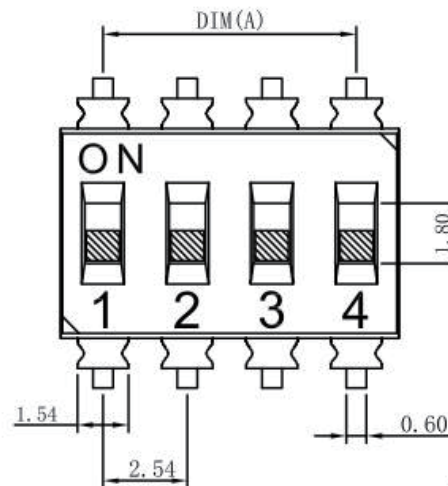
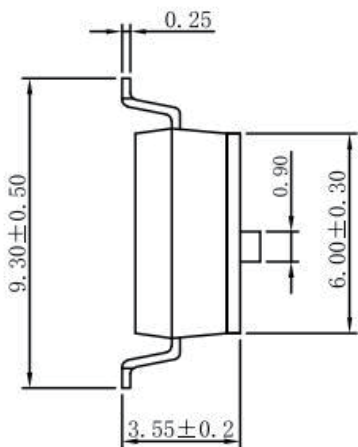
5.6	盐雾试验 Salt Mist	在以下设定条件下进行测量： The switch shall be checked after following test: (1) 温度: $35^{\circ}\text{C} \pm 2^{\circ}\text{C}$ temperature: $35^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (2) 盐溶液浓度: $5 \pm 1\%$ (质量百分比) salt solution : $5 \pm 1\%$(solids by mass) (3) 时间: $8 \pm 1\text{h}$ Time: $8 \pm 1\text{h}$ 实验后的盐沉积物后水冲掉 After test, salt deposit shall be removed by running water.	金属件上没有腐蚀斑点 No remarkable corrosion shall be recognized in metal part.
5.7	动作寿命 Operation life	有负载: 根据下面的测试要求进行测试: No load: Measurement shall be made following the test set forth below: (1) 按动速率: $15 \sim 20$ 次/分 Rate of operation: $15 \sim 20$ cycle/minute 2) 无故障寿命: 2,500 次 fault-free life: 2,500cycles	接触电阻 $\leq 1\Omega$ Contact resistance $\leq 1\Omega$ 绝缘电阻 $\geq 10\text{M}\Omega$ Insulation Resistance $\geq 10\text{M}\Omega$ 触点抖动 ON-20ms max Bounce OFF-20ms max 按力: 初值的 $\pm 30\%$ Operating Force: initial value $\pm 30\%$ Item3.3 Item4.1
5.8	可焊性 Solderability	在以下设定条件下进行测量: Measurements shall be made following the test set forth below: (1) 焊接温度: $240 \pm 5^{\circ}\text{C}$ Solder temperature : $240 \pm 5^{\circ}\text{C}$ (2) 浸入时间: $3\text{s} \pm 0.5\text{s}$ Immersion time: $3\text{s} \pm 0.5\text{s}$	除边缘外涂层应均匀覆盖 90%以上 Except for the edge, the coating should cover a minimum 90%

6. 焊接条件: SOLDERING CONDITIONS:

6.1	手工焊接 Hand soldering	请按以下条件进行焊接: (1) 焊锡温度: $\leq 350^{\circ}\text{C}$ (2) 连续焊接时间: $\leq 3\text{ s}$ Please practice according to below conditions: (1) Soldering temperature: $\leq 350^{\circ}\text{C}$ (2) Continuous soldering time: $\leq 3\text{ s}$	
6.2	回流焊时 Conditions for reflow	对于 SMT 产品, 请按照以下条件进行焊接: For SMT products, Please soldering by follow conditions:  注意: 以上温度条件是等温条件下 PCB 表面温度。由于 PCB 的材质、尺寸、厚度等不同, PCB 从炉中取出时表面温度会有所不同。因此, 不允许在取出后立即进行测试。 Attention: the condition above is the temperature of the PCB surface on the part used PCBs will get different temperature because of the difference of materials, sizes, thickness and so on. Should control it below 260°C.	

注意事项 (Notes):

- 印刷基板的焊盘尺寸参见产品图。
The pad size of the printed substrate is shown in the product diagram.
- 在使用烙铁的情况下, 焊锡温度应在 350°C 以下、3 秒以内。
In the case of using soldering iron, soldering conditions shall be 350°C max and 3 sec. max.
- 防止助焊剂从开关的顶端渗入
Prevent flux penetration from the top of the switch
- 开关浸焊后, 注意不要用溶剂或类似品清洗开关。
After switches were soldered, please be careful not to clean switches with solvent or other similar products.
- 浸焊后, 注意不要在顶部施加负荷。
Right after switches were soldered; please be careful not to load to on the knobs of switches.
- 注意不要施加超负荷的压力或晃动开关。
Please be cautions not to give excessive static load or shock to switches.
- 开关浸焊后, 印刷基板注意不要叠放。
Please be careful not to pile up P.W.B. after switches were soldered



xxP 位: mm	1	2	3	4	5	6	7	8	9	10	11	12
DIM (A)	/	2.54	5.08	7.62	10.16	12.70	15.24	17.78	20.32	22.86	/	27.94
DIM (B)	2.54	5.08	7.62	10.16	12.70	15.24	17.78	20.32	22.86	25.40	/	30.48
管桩 (pcs)	190	100	67	50	40	33	29	25	22	20	/	16
编带 (pcs)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	/	1000

General tolerance: ±0.3mm

NO.	NAME	MATERIAL	QTY.	FINISHING
1	端子	PHOSPHOR COPPER	1	Au PLATING
2	接触片	BERYLLIUM COPPER	1	Au PLATING
3	上盖	PPS	1	BLACK
4	手柄	PA	1	WHITE
5	底座	PPS	1	BLACK

CUSTOMER DRAWING		 连兴旺电子(深圳)有限公司 connectivity LXWCONN ELECTRONICS (SHENZHEN) CO., LTD					
GENERAL TOLERANCE .X ±0.25 .XX ±0.15 .XXX ±0.05 .ANGLE ±1°		DESIGN Tan 2026.06.06		TITLE TACT SWITCH			
		CHECKED Tan 2026.06.06					PART NO. BMAxxB-E1A
SIZE A4		APPROVAL Tan 2026.06.06		SCALE 1:1	UNITS MM	REV. A	SHEET 1 OF 1