

信赖性测试报告（开关）

Reliability test report (SWITCH)

品名 Name: POWER SWITCH

料号 P/N: RS601D1-1010011BB

客户料号 Customer P/N:

日期 Date: 2020.11.13

一.主要尺寸测量记录 Dimensions measure:

测量依据 Standard: 产品图 Product drawing										
测量工具 Tool: 游标卡尺 Caliper										
测量员 Operator:										
Sample Dim spc	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
24.10±0.3	24.17	24.16	24.18	24.17	24.19	24.18	24.16	24.16	OK	
4.80±0.1	4.76	4.78	4.77	4.76	4.75	4.77	4.78	4.76	OK	
8.80±0.2	8.73	8.75	8.74	8.76	8.75	8.73	8.75	8.76	OK	
9.70±0.3	9.64	9.65	9.65	9.64	9.65	9.64	9.66	9.65	OK	
21.0±0.3	20.95	20.95	20.97	20.96	20.97	20.95	20.96	20.97	OK	
0.80±0.05	0.81	0.83	0.82	0.81	0.83	0.82	0.81	0.83	OK	

二 常温性能测试 Ambient temperature performance test:

测试条件 Test condition: 室内温度-10℃~+40℃, 相对湿度 60%~90%

Indoor temperature -10℃~+40℃, Relative humidity 60%~90%

测试项目 Test item:

A. 外观 Appearance

B. 接触电阻 Contact resistance

C. 绝缘电阻 Insulation resistance

D. 耐电压 Withstand voltage

E. 动作力 Movement force

F. 端子强度测试 Terminal strength test

测试结果 Test results:

A. 外观 Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

B. 接触电阻 Contact resistance

标准 Standard: $\leq 50\text{m}\Omega$

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	10.3	10.4	10.3	10.5	10.8	10.4	10.6	10.5	OK	

C. 绝缘电阻 Insulation resistance

标准 Standard: $\geq 100\text{M}\Omega$ 500VDC

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	OK	OK	OK	OK	OK	OK	OK	OK	OK	

D. 耐电压 Withstand voltage

标准 Standard: 开路端子之间 Terminal with terminal $\geq 1800\text{V AC}/1\text{minute}$ 端子与基座之间 Terminal with Base $\geq 3000\text{V AC}/1\text{minute}$

(漏电流 Leakage current :0.5mA)

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

E. 动作力 Movement force

标准 Standard:3-9N

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	5.8	5.9	5.7	5.6	5.8	5.8	5.9	5.8	OK	

F. 端子强度测试 Terminal strength test

标准 Standard:80N/1 minute

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

三 高温测试 High temperature test:

测试条件 Test condition: 测试温度 $105 \pm 2^\circ\text{C}$, 测试时间 96 小时, 恢复时间 30 分钟Temperature $105 \pm 2^\circ\text{C}$, for 96H

测试项目 Test item:

A. 外观 Appearance

B. 接触电阻 Contact resistance

C. 绝缘电阻 Insulation resistance

D. 耐电压 Withstand voltage

E. 动作力 Movement force

F. 端子强度测试 Terminal strength test

测试结果 Test results:

A. 外观 Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

B. 接触电阻 Contact resistance

标准 Standard: $\leq 50\text{m}\Omega$

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	10.5	10.3	10.4	10.6	10.4	10.5	10.3	10.6	OK	

C. 绝缘电阻 Insulation resistance

标准 Standard: $\geq 100M\Omega$ 500VDC

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	OK	OK	OK	OK	OK	OK	OK	OK	OK	

D. 耐电压 Withstand voltage

标准 Standard: 开路端子之间 Terminal with terminal $\geq 1800V$ AC/1minute端子与基座之间 Terminal with Base $\geq 3000V$ AC/1minute

(漏电流 Leakage current :0.5mA)

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

E. 动作力 Movement force

标准 Standard: 3-9N

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	5.7	5.9	5.8	5.7	5.9	5.6	5.7	5.6	OK	

F. 端子强度测试 Terminal strength test

标准 Standard: 80N/1 minute

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

四 低温测试 Low temperature test:

测试条件 Test condition: 测试温度 $-20\pm 2^{\circ}C$, 测试时间 96 小时, 恢复时间 30 分钟Temperature $-20\pm 2^{\circ}C$, for 96H

测试项目 Test item:

A. 外观 Appearance

B. 接触电阻 Contact resistance

C. 绝缘电阻 Insulation resistance

D. 耐电压 Withstand voltage

E. 动作力 Movement force

F. 端子强度测试 Terminal strength test

测试结果 Test results:

A. 外观 Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

B. 接触电阻 Contact resistance

标准 Standard: $\leq 50\text{m}\Omega$

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	10.4	10.5	10.3	10.5	10.6	10.4	10.5	10.6	OK	

C. 绝缘电阻 Insulation resistance

标准 Standard: $\geq 100\text{M}\Omega$ 500VDC

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	OK	OK	OK	OK	OK	OK	OK	OK	OK	

D. 耐电压 Withstand voltage

标准 Standard: 开路端子之间 Terminal with terminal $\geq 1800\text{V AC/1minute}$ 端子与基座之间 Terminal with Base $\geq 3000\text{V AC/1minute}$

(漏电流 Leakage current :0.5mA)

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

E. 动作力 Movement force

标准 Standard: 3-9N

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	5.6	5.9	5.8	5.7	5.9	5.8	5.6	5.7	OK	

F. 端子强度测试 Terminal strength test

标准 Standard: 80N/1 minute

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

五 恒温恒湿测试 Constant temperature and humidity test:

测试条件 Test condition: 测试温度 $40 \pm 2^{\circ}\text{C}$, 相对湿度 90%~95%, 测试时间 96 小时,
恢复时间 30 分钟

Temperature $40 \pm 2^{\circ}\text{C}$, Relative humidity 90%~95%, for 96H

测试项目 Test item:

- A. 外观 Appearance B. 接触电阻 Contact resistance
C. 绝缘电阻 Insulation resistance D. 耐电压 Withstand voltage
E. 动作力 Movement force F. 端子强度测试 Terminal strength test

测试结果 Test results:

A. 外观 Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

B. 接触电阻 Contact resistance

标准 Standard: $\leq 50\text{m}\Omega$

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	10.3	10.5	10.6	10.4	10.5	10.3	10.6	10.5	OK	

C. 绝缘电阻 Insulation resistance

标准 Standard: $\geq 100\text{M}\Omega$ 500VDC

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	OK	OK	OK	OK	OK	OK	OK	OK	OK	

D. 耐电压 Withstand voltage

标准 Standard: 开路端子之间 Terminal with terminal $\geq 1800V$ AC/1minute端子与基座之间 Terminal with Base $\geq 3000V$ AC/1minute

(漏电流 Leakage current :0.5mA)

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

E. 动作力 Movement force

标准 Standard: 3-9N

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	5.8	5.7	5.8	5.6	5.9	5.7	5.6	5.8	OK	

F. 端子强度测试 Terminal strength test

标准 Standard: 80N/1 minute

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

六 可焊性测试 weld ability test:

测试条件 Test condition: 锡液温度 $260 \pm 10^\circ C$, 浸入时间 $3 \pm 1S$, 浸入部份上锡面积不得少于 90%, 且焊锡应均匀分布。

Tin temperature $260 \pm 10^\circ C$, immersion time $3 \pm 1S$, immersion part of the tin area should not be less than 90%, and the solder should be evenly distributed.

测试项目 Test item: A. 外观 Appearance

测试结果 Test results:

A. 外观 Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

七 耐焊接热测试 Resistance to welding heat test:

测试条件 Test condition: 锡液温度 $350 \pm 10^\circ\text{C}$, 浸入时间 $3 \pm 0.5\text{S}$.Tin liquid temperature $350 \pm 10^\circ\text{C}$, immersion time $3 \pm 0.5\text{S}$.

测试项目 Test item: A.外观 Appearance

测试结果 Test results: Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

八 寿命测试 Durability test:

测试条件 Test condition: 负载测试 10000 次

Load test 10000 times

测试项目 Test item: (after durability 10000 test)

A.外观 Appearance

B.接触电阻 Contact resistance

C.绝缘电阻 Insulation resistance

D.耐电压 Withstand voltage

E. 动作力 Movement force

F.端子强度测试 Terminal strength test

测试结果 Test results:

A.外观 Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

B.接触电阻 Contact resistance

标准 Standard: $\leq 50\text{m}\Omega$

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	10.5	10.6	10.4	10.3	10.6	10.4	10.5	10.6	OK	

C. 绝缘电阻 Insulation resistance

标准 Standard: $\geq 100\text{M}\Omega$ 500VDC

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	OK	OK	OK	OK	OK	OK	OK	OK	OK	

D. 耐电压 Withstand voltage

标准 Standard:开路端子之间 Terminal with terminal $\geq 1800V$ AC/1minute端子与基座之间 Terminal with Base $\geq 3000V$ AC/1minute

(漏电流 Leakage current :0.5mA)

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

E. 动作力 Movement force

标准 Standard:3-9N

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
测量值 Test value	5.8	5.6	5.9	5.7	5.8	5.9	5.6	5.7	OK	

F. 端子强度测试 Terminal strength test

标准 Standard:80N/1 minute

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

九 盐雾测试 Salt spray test:

测试条件 Test condition: 盐水温度 $35 \pm 2^\circ C$. 盐水浓度 $5 \pm 1\%$, 喷雾时间 24 小时。Salt temperature $35 \pm 2^\circ C$, brine concentration $5 \pm 1\%$, spray time 24 hours.

测试项目 Test item: A.外观 Appearance

测试结果 Test results:

A.外观 Appearance

样品 Sample	1	2	3	4	5	6	7	8	判定 judgment	备注 Notes
判定 judgment	OK	OK	OK	OK	OK	OK	OK	OK	OK	

审核/日期: LuFang.Wu

Checked by:

测试员/日期: GuangRong.Ye

Operator by: