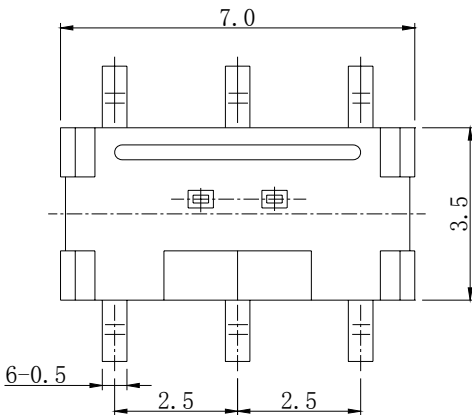
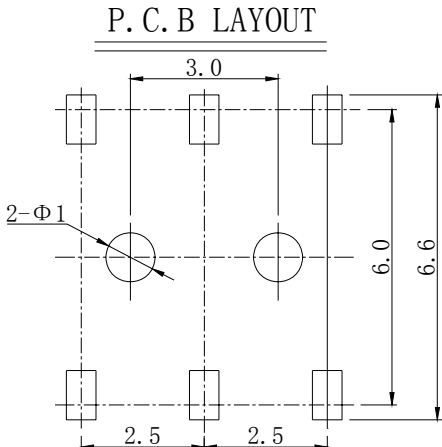
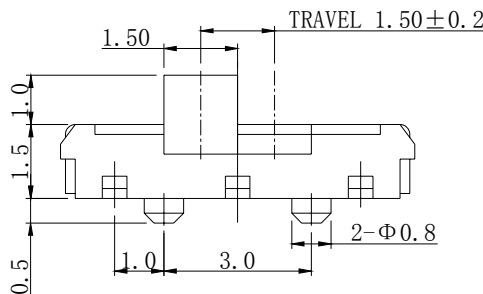
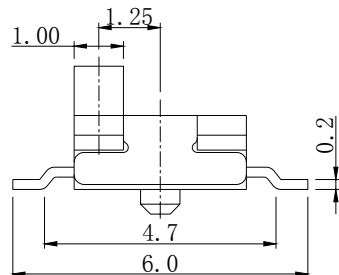
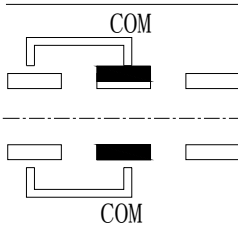


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类 型		滑动开关		品 名		MSL038B-03M-22-T	
1. 功能规格							
1.1额定电压		DC4V		1.6自由位置 (FP)			
1.2额定电流		300 mA		1.7动作位置 (OP)			
1.3接触电阻 (CR)		≤100mΩ		1.8行程 (PT)		1.5±0.2mm	
1.4操作力 (OF)		200±120gf		1.9灵敏度 (BT)		≤5ms	
1.5回弹力 (RF)				1.10			
2. 可靠度参数							
2.1机械寿命		10,000 cycles		2.5焊接工艺		手工焊、回流焊	
2.2电气寿命		10,000 cycles		2.6适用温度		-25° C ~ +70° C	
2.3绝缘电阻 (IR)		≥100MΩ DC500V		2.7适用湿度		<85%RH	
2.4耐压强度 (WV)		AC100V 1 minute		2.8			
3. 尺寸规格图							
				P. C. B LAYOUT 			
							
CIRCUIT DIACRAM 							
版 本		修订内容				日 期	修订人
文件编号		第C版 第0次修订				一般公差	±0.2
文件名称		成品规格书				单 位	mm
拟制	李 颖	审核	杨宏权	批准	吴万涛	生效日期	20080429

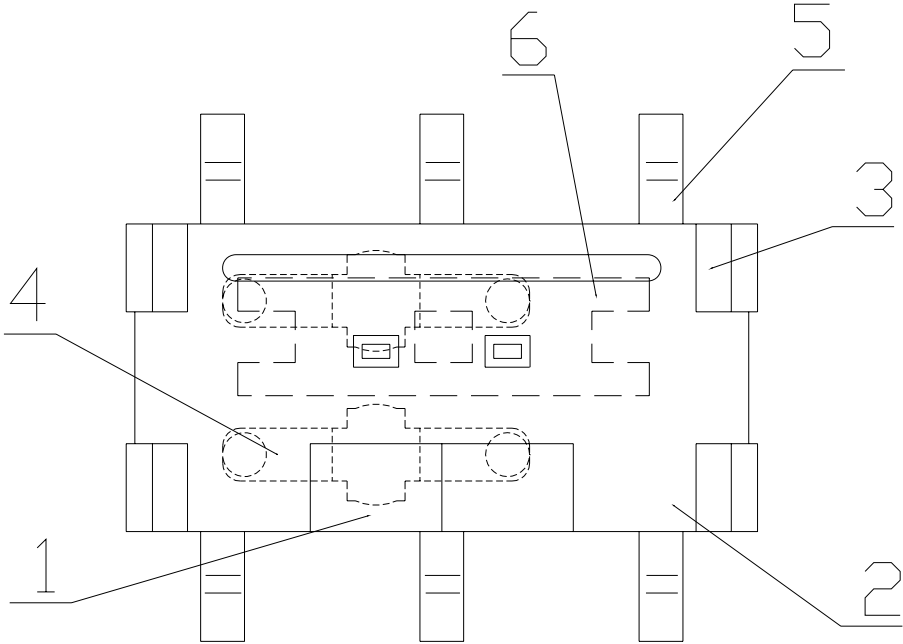
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SWEETA PRODUCTS CORPORATION

SERIES 系列		SLIDE SWITCHES(MSL038)		Issuance date 日期:		20060801		
Document No.文件名称			DIC/PE038-004		Edition 版本	C	Page 页码	第 1 页 共 4 页
NO.	Part Name 品名	Q' TY 数量		Generic Class 材质		SGS report No. SGS 报告编号		
1	Stem 型物	1		Nylon		见附件 SGS 报告		
2	Case 外壳	1		SUS301		见附件 SGS 报告		
3	Base 底座	1		Nylon		见附件 SGS 报告		
4	Spring Plate 弹片	2		C5210		见附件 SGS 报告		
5	Terminal 端子	6		C2680		见附件 SGS 报告		
6	Fixed Rod 定位片	1		SUS301		见附件 SGS 报告		

Structure chart:

结构示意图:



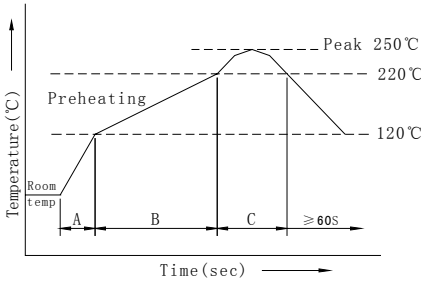
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1、General(一般特性)：							
1.1 Switch rating:		DC 4V, 0. 3A		(规格: DC 4V, 0. 3A)			
1.2Operating temperature range		-25℃～80℃		(操作温度范围: -25℃～80℃)			
1.3 Preservative temperature range		-30℃～80℃		(储存温度: -30℃～80℃)			
1.4 Storage humidity range		<85%RH		(储存湿度: 85%RH)			
2.Performance 功能参数							
2.1 Electrical characteristics(电气特性)							
Items 项目		Test conditions 测试条件				Criteria 标准	
2.1.1	Contact resistance 接触电阻	Applying a static load twice the operating force to the stem, measurements shall be made between the terminals. Measurement shall be made with a contact resistance meter for 2m Ω precision under the condition which a voltage of DC 5V and a current of 0.1A shall be applied between the terminals. 在按钮上施加两倍操作力的静负荷值,采用精度为 2m Ω 高稳定度线性毫欧表,在 DC 5V 0. 1A 的条件下测量端子两端的接触电阻。				Refer to individual product drawing. 参考规格图纸	
2.1.2	Insulation resistance 绝缘电阻	Spec. voltage (Refer to the 2.3 item of spec. drawing) is applied between each pair of terminals and between the terminal and the metal frame for one minute. Measurement shall be made with a test instrument of insulation resistance under the condition Spec. voltage is applied between the terminals . 采用绝缘电阻器仪分别在相互绝缘的所有端子之间各接线端子与外露的非金属零件之间加载规格电压（参见规格图纸 2.3 项）持续 1 分钟测试绝缘电阻值。				Refer to individual product drawing. 参考规格图纸	
2.1.3	Dielectric withstand in voltage 耐压强度	Spec. voltage (Refer to the 2.4 item of spec. drawing)shall be applied across terminals and frame for one minute. 在端子两端之间加载规格电压（参见规格图纸 2.4 项），持续时间为 1 分钟。				There shall be no breakdown 无电击穿等异常.	
3.Mechanical characteristics 机械特性							
3.1	Operation force 操作力	Placing the switch such that the direction of switch operation is vertical, and then gradually increasing the load applied to the stem, the maximum load for the stem to come to operating position shall be measured. 置开关垂直状态, 渐增力度使型物至动作位置为最大值之力度.				Refer to individual product drawing. 参考规格图纸	
3.2	Terminal strength 端子强度	A static load of 500gf Max shall be applied to the tip of the terminal for 30 sec. in any direction. 在任意一个方向的先端加上 500gf Max 力度测试, 时间为 30 秒。				Electrical characteristics shall be satisfied without damage or excessive looseness of terminals. 在端子中没有裂开, 松动等异常, 满足于机械, 电器性能。	
3.3	Displacement of actuator(Knob) 柄强度	A static load of 500gf Max shall be applied to the terminal for 15 Sec. In any direction. 在型物前端任意一个方向加 500gf Max 力度测试, 时间为 15 秒。					

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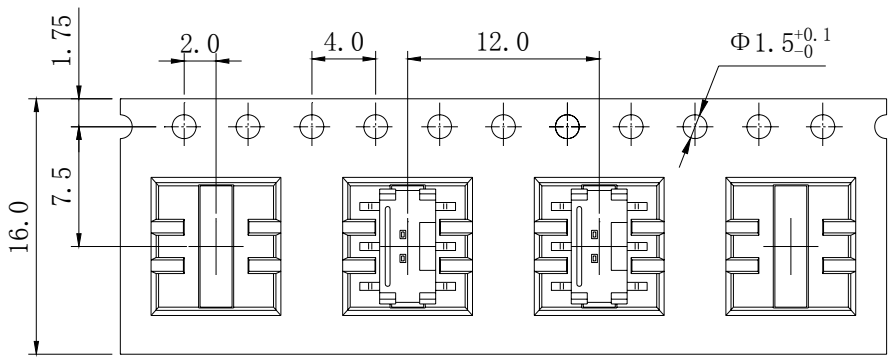
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4. soldering characteristics 焊接性能																																					
Items 项目		Test conditions 测试条件				Criteria 标准																															
4.1	Hand soldering 手工焊	Use a soldering iron of 30 watts, controlled at 380℃ approximately 3 seconds 1time while applying solder. 焊接时需在 30 瓦烙铁, 控制于 380℃, 大约 3 秒钟 1 次条件下进行。				A new uniform coating of solder shall cover a minimum of 90% of the surface being immersed. There shall be no defects in appearance or in the mechanical functions. 覆锡性能达到浸入表面的 90% 以上 没有出现任何外观和机械功能上的损伤。																															
4.2	Reflow soldering 回流焊	When applying reflow soldering, the peak temperature of the reflow Oven should be set to 250℃max. 当使用回焊炉进行焊接时, 最高温度设置为 250℃。 Condition for soldering (Reflow & Non-washable Type) Temperature Profile 焊接温度曲线图如下: <table><tr><td></td><td>Components size</td><td></td><td>Unit</td></tr><tr><td>A</td><td>Temp.rise gradient</td><td>40S</td><td>sec</td></tr><tr><td rowspan="2">B</td><td>Heating time</td><td>60-120S</td><td>sec</td></tr><tr><td>Heating temperature</td><td>120-220℃</td><td>℃</td></tr><tr><td rowspan="2">C</td><td>Time over 220℃</td><td>60S</td><td>sec</td></tr><tr><td>Peak temperature</td><td>250</td><td>℃</td></tr><tr><td></td><td>Peak-temp.hold time</td><td>moment</td><td>sec</td></tr><tr><td colspan="2">Soldering</td><td>1</td><td>times</td></tr></table>					Components size		Unit	A	Temp.rise gradient	40S	sec	B	Heating time	60-120S	sec	Heating temperature	120-220℃	℃	C	Time over 220℃	60S	sec	Peak temperature	250	℃		Peak-temp.hold time	moment	sec	Soldering		1	times	There shall be no defects in appearance or in the mechanical functions. 没有出现任何外观和机械功能上的损伤。	
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Soldering		1	times																																		
5. Durability characteristic:耐久性能																																					
5.1	Mechanical life 机械寿命	(1) Without loading 无负载 (2) Operating speed : 15 cycles/minute 操作频率: 15 次/分钟 (3) Push force : maximum value of operating force twice 推动力: 操作力的最大规格值的两倍 (4) Life: 10,000 cycles 寿命: 10,000 次				After test: (1)Contact resistance: 1 ohm Max. (2)Bounce: 5m sec. Max. (3)Withstand voltage: AC100V, 1 minute (4)Operating force: 30% of initial value (5)There shall be no defects in appearance or in the mechanical functions.																															
5.2	Electrical life 电气寿命	(1) which the load of 0.3A DC 4V 负载为 0.3A DC 4V (2) Operating speed : 15 cycles/minute 操作频率: 15 次/分钟 (3) Push force : maximum value of operating force twice 推动力: 操作力的最大规格值的两倍 (4) Life: 10,000cycles 寿命: 10,000 次				试验后: (1)接触电阻:1 欧姆以下 (2)灵敏度: 5 毫秒以下 (3)耐压强度: AC100V, 1 分钟 (4)操作力度: 测试初始值的 30%以内 (5)没有出现任何外观和机械功能上的损伤。																															

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6. Packing explaintion 包装说明

Items 项目	Test conditions 测试条件	Criteria 标准
6.1 Packing 包装	(1) The products are packed in the taping packaging. 产品使用料带包装 (2) The number of the reels: 数量为一盘 (3) Fine(5)reels at maximum shall be packed in a package. 包装一般在 5 卷以下 (4) The number of the switches: 开关数量: (5) 1,500 switches shall be packed in a reel. 1,500 个开关包装为 1 卷 (6) It should be noted that we Regard two cartons mentioned above as on package for export. 注意包装产品两侧硬胶之间不允许外露。 (7) Tape form and dimensions: 料带形状及尺寸	There shall be no defects in appearance or in the mechanical functions in the process of shipping. 在包装运输过程中没有出现任何外观和机械功能上的损伤。
		

7. Special Requirements 特别要求

7.1 Hazardous Substance Management: Follow environmental requirements: Hazardous Substance DIC/WI/G506。
危害物质管理：遵循环境物质规范：危害物质 DIC/WI/G506。

8. Application Notes: 注意事项

8.1 Avoid storing the products in a place at high temperature, high humidity and in corrosive gases.

避免储藏于高温、潮湿及腐蚀的场所。

8.2 Avoid excessive force when inserting into P.C.B so as to avoid deformation of terminals.

当插入 P.C.B 避免使用过分的外力，以防端子变形。

8.3 Influence for the characteristics by something dust or foreign articles. There is a possibility something dust or foreign articles put into click of brush plate and it should cause abnormal rotation feeling.

避免灰尘或外物会掉入开关内影响其接触性能。