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1. SCOPE (适用范围)

This specification covers the performance, tests and quality requirements for the SD CARD Connector.(本规范涵盖了 SD CARD 连接器的性能、测试和质量要求。)

2. PRODUCT DESCRIPTION (产品描述)

DESCRIPTION (描述)	Part Number (料号)
卡座连接器 SD 5in1 H4.60	XBSD-1251-5C1

3. APPLICABLE DOCUMENT (适用文件)


The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence. (下列文件构成本规范的一部分，在此规定的范围内。本规范要求与产品图纸有冲突时，以产品图纸为准。如果本规范的要求与参考文件发生冲突，应以本规范为准。)

- MIL-STD-105
- EIA-364
- QQ-N-290
- ISO/IEC- 7816

4. REQUIREMENTS (要求)

4.1. Design and Structure (设计和结构)

Product shall be of the design, structure and physical dimensions specified on the applicable product drawing.

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(产品的设计、结构和物理尺寸参考所适用的产品图纸)

4.2. Materials/ Finish (材料/表面处理)

Materials used in the structure of product shall be as specified on the applicable product drawing. (产品结构中使用的材料参考所适用的产品图纸)

4.3. Ratings (额定功率)

Item (项目)	Standard (标准)	
Rated Voltage (Maximum) 额定电压	125V	AC/DC
Rated Current (Maximum) 额定电流	0.5A	
Operating temperature range 工作温度范围	-20°C ~ +80°C From -20 to +80 degree centigrade	
Storage Temperature Range 储存温度范围	-40°C ~ +85°C From -40 to +85 degree centigrade	


5.0 TEST STANDARD (测试标准)

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows (除另有说明外，用以进行测量和测试的标准环境条件范围如下)

5.1 Ambient temperature (环境温度) : 5°C to 35°C

5.2 Relative humidity (相对湿度) : 45% to 85%

5.3 Air pressure (气压) : 86Kpa to 106Kpa

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6.0 PERFORMANCE AND TEST DESCRIPTION (性能和测试类型)

6.1 EXAMINATION (检查)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	Appearance (外观)	Visual. (目视)	Should not have any flaw Scratch discoloration and crushed (无任何裂痕、刮伤、 污染和变形)

6.2 ELECTRICAL (电气)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
2	Low level contact resistance. (接触电阻)	Subject mated contacts assembled in housing to 20mV Max open circuit at 10mA Max Test method complies with EIA-364-06C. (依EIA-364-06C, 开路电压为 20mV最大, 电流为1mA最大)	Contact terminals接触端子: 100 mΩ Max. Switch terminals开关端子: 100 mΩ Max
3	Insulation Resistance. (绝缘电阻)	After 500 VDC for 1 minute, measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies. (使用 500 V交流電測試1分鐘, 測量相邻两端的绝缘 电阻)	1000 MΩ min.
4	Dielectric strength. (耐 电压)	Apply ac 500V for 1minute 0.5mA between adjacent terminal or ground. Test method complies with EIA-364-20C (依EIA-364-20C, 相邻两端使 用500 V交流电测试1分钟, 电流0.5mA)	Without damage to parts arcing or breakdown etc. (无短路或其他损坏)
5	Temperature Rise (温 升)	The contacts shall be wired in series and apply rated current. Measure the temperature rising on contact. (触点串 联, 施加额定电流, 测量触点温升)	30 °C Max. under loaded rating (温度上升不超过30度)



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6.3 MECHANICAL (机械)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
6	Durability. (耐久)	Cycle Rate: 400 to 600 cycles per hour (每小时 400 至 600 次循环) No. of Cycles: 1000 cycles. (循环周期 1000 次) EIA 364-B	MAX.Change form initial contact Resistance 40 mΩ Max. No physical damage to Connector shall occur. (测试前后接触电阻40 mΩ Max. 变化量, 并且不会对连接器造成物理损伤)
7	Insertion force. (插入力)	Measure the module card insertion force at 25±3mm/min. (插入速度为 25 ± 3mm/分钟) EIA364-13	10 N maximum
8	Extraction force. (拔出力)	Measure the mated module card extraction force from the socket at 25±3mm/min. (拔出速度为 25 ± 3mm/分钟) EIA364-13	0.5N minimum and 10N maximum
9	Mechanical Shock (机械冲击)	Accelerated Velocity (加速度): 50 G (490 m/s²) Waveform (波形): Semi Sine (半正弦) Duration (持续时间): 11 m sec. No of Shocks (冲击频率): 6/dir., 3 axis, (6 个面, 3 个轴) (Total of 18 Shocks 共 18 次冲击) EIA364-27	MAX. Change from initial contact Resistance 40 mΩ Max no electrical discontinuity greater than 100nsec. shall occur (测试前后接触电阻 40 mΩ Max. 变化量, 电气连续性不超过 100 秒)
10	Vibration (振动)	Frequency Range (频率范围): 10-2000 Total Amplitude (总振幅): 2m/s². Duration (时间): 2.5 hours 3 axes IEC 60512-6-4	MAX. Change from initial contact Resistance 40 mΩ Max no electrical discontinuity greater than 100nsec. shall occur (测试前后接触电阻40 mΩ Max. 变化量, 电气连续性不超过100秒)



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6.4 ENVIRONMENTAL (环境)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
11	Humidity-Thermal Cycling (湿热循环)	Ambient Temp. (环境温度): 25 to 60 °C Relative humidity (相对湿度): 90 to 95 % Duration (持续时间): 10 cycles EIA364-31	MAX. Change from initial contact Resistance 40 mΩ Max Insulation Resistance: 1000 MΩ Min. initial 100 MΩ Min. after test No physical damage to connector shall occur. (测试前后接触电阻40 mΩ Max. 变化量, 测试前绝缘电阻1000MΩ Min. , 测试后100MΩ Min. 并且不会对连接器造成物理损伤)
12	Thermal Shock (热冲击)	Temperature Range (温度范围): -20 to 80 °C No. of Cycles (次数): 5 cycles for 30 minutes (5次/30分钟) EIA364-32	MAX. Change from initial contact Resistance 40 mΩ Max No physical damage to connector shall occur. (测试前后接触电阻40 mΩ Max. 变化量, 并且不会对连接器造成物理损伤)
13	Temperature Life (高温寿命)	Chamber Temperature (测试温度): 85±2 °C Duration (测试时间): 250 hours EIA364-17	MAX. Change from initial contact Resistance 40 mΩ Max No physical damage to connector shall occur. (测试前后接触电阻40 mΩ Max. 变化量, 并且不会对连接器造成物理损伤)
14	Low Temperature Resistance (低温电阻)	Chamber Temperature (测试温度): -40 ± 3 °C Duration (测试时间): 96 hours Dummy card engaged during test (使用的模拟卡片测式) EIA364-59	MAX. Change from initial contact Resistance 40 mΩ Max No physical damage to connector shall occur. (测试前后接触电阻40 mΩ Max. 变化量, 并且不会对连接器造成物理损伤)



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15	Salt Spray Test (盐雾测试)	<p>Chamber Temperature (测试温度) : 35+/-2 °C Humidity (湿度):85%(R.H) Salt Solution (盐溶液) : 5 ± 1.0% Length of Test (测试时间) : 24 hours EIA364-26</p>	<p>MAX.Change from initial contact Resistance 40 mΩ Max Appearance shall no rust, oxidation, corrosion and other undesirable phenomena.(测试前后接触电阻 40 mΩ Max. 变化量, 外观须无生锈、氧化、腐蚀等不良现象)</p>
16	Solder ability (沾锡性)	<p>Solder Temperature (焊接温度) : 245+/-3°C Immersion Duration (浸泡时间) : 3 ±0.5 sec. Flux (助焊剂) : RMA 25%</p>	<p>Wet Solder Coverage: 95 % Min. (沾锡面积须95%最小)</p>
17	Resistance to soldering heat (焊锡耐热性)	<p>The contact of terminal shall be tested resistance to soldering heat in the following conditions. After Resistance to soldering heat test Contact Resistance. (端子应在下列条件下做耐吃锡性试验, 焊锡耐热性后试接触阻抗) In case of solder iron (2 time) 电烙铁(两次) Temperature 温度: ≤350°C Time 时间: 5s+/-1s</p>	<p>Should not have any flaw scratch and crack. (无任何裂痕、刮伤和破裂)</p>
18	IR-reflow (回流焊)	<p>MIL-STD-202G method 210F Peak temperature time 260°C Max,10 sec or more. (峰值温度时间最高 260°C, 10 秒或更长的时间) Duration : 2 cycles (过炉 2 次) Lead-Free Solder (无铅锡膏) : Sn96.5Ag3Cu0.5 Refer to section 8.0 (请参阅第 8.0 条)</p>	<p>Should not have any flaw scratch and crack (无任何裂痕、刮伤和破裂) No visual damage to insulator. (绝缘体不得有严重变形)</p>




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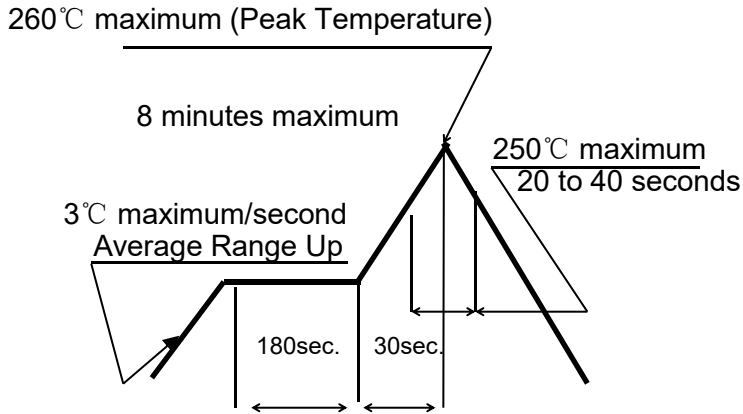
Title: SD CARD SD 卡座

7.0 Product Qualification and TEST GROUP (产品验证和测试分组)

TEST ITEM (测试项目)		TEST GROUP (测试分组)										
		A	B	C	D	E	F	G	H	I	J	K
		TEST SEQUENCE										
1	Appearance (外观)	1,4	1,5	1,6	1,5	1,6	1,7	1,5	1,5	1,5	1,4	1,4
2	Low Level Contact Resistance (接触电阻)		3,6	3,7			3,8	3,6	3,6	3,6		2,5
3	Dielectric withstanding Voltage (耐电压)					4,8	5,9					
4	Insulation Resistance(绝缘电阻)					3,7	4,10					
5	Temperature Rising (升温)	3										
6	Durability (耐久)		4									
7	Vibration (振动)			4								
8	Mechanical Shock (机械冲击)			5								
9	Insertion Force (插入力)				3							
10	Extraction Force (拔出力)				4							
11	Humidity-Thermal Cycling (湿热循环)					5						
12	Thermal Shock (热冲击)						6					
13	Temperature Life (高温寿命)							4				
14	Salt Spray (盐雾)								4			
15	Low Temperature Resistance (低温电阻)									4		
16	Solder ability (沾锡性)										3	
17	Reflow Soldering Heat Resistance (焊锡耐热性)											3
18	IR-reflow (回流焊)	2	2	2	2	2	2	2	2	2	2	
	Number of Samples Required (所需样本数目)	5										

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8.0 REFLOW PROFILE (回流焊炉温图)



(Preheat Temperature 预热温度: 150~200°C Maximum.)
 Temperature Condition Graph. 温度状态图
 (Temperature on Board Pattern Side)

Requirement 要求: No physical damaged or plastic melting.: 无物理损伤或塑料熔化

Rev.	Description	Date revised	Created/ Revised by
01	New Release	2015/04/30	Josephine Lin
02	ADD A0528-0001/ A0528-0003	2017.11.13	Sandy
03	A0586-0001	2018.09.10	Sandy
04	A0587-0001	2018.09.10	Sandy
05	ADD A0600-0001/A0600-0003	2018.11.23	Sandy
06	ADD A0687-0001/A0687-0003	2019.03.19	Linda
07	ADD A0749-0001/A0749-0003, modify Insulation Resistance.	2019.08.14	Linda
08	ADD A0640 series	2019.11.15	Linda