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	Date Issued	2022-04-06	Prepared by	Josephine
	Date revised	2022-11-23	checked by	Jay
	Rev. No.	01	Approved by	Mei Chen
Product Specification				
Title : DDR4 DIMM Through-hole Memory Socket Connector				

1. SCOPE (适用范围)

This specification covers the performance, tests and quality requirements for the DDR4 DIMM Through-hole Memory Socket Connector.(本规范涵盖了 DDR4 DIMM Through-hole Memory Socket 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)
DDR4 连接品 180度双塑鱼插脚,黑色PA46料,镀金15u " 脚长2.67	X9405WV-288H2-46V15
DDR4 连接品 180度双塑鱼插脚大黑色PA46料,镀金15u " 脚长3.18	X9405WV-288I2-46V15
DDR4 连接品 180度双塑鱼插脚,黑色PA46料,镀金30u " 脚长2.67	X9405WV-288H2-46V30
DDR4 连接品 180度双塑鱼插脚大黑色PA46料,镀金30u " 脚长3.18	X9405WV-288I2-46V30

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。)

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. (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)

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4.3. Ratings (额定功率)

Item (项目)	Standard (标准)
Rated Voltage (Maximum)额定电压	25V AC
Rated Current (Maximum)额定电流	0.75A
Operating temperature range工作温度范围	-55℃~+105℃ From -55 to +105 degree centigrade
Storage Temperature Range储存温度范围	-55℃~+105℃ From -55 to +105 degree centigrade

5. TEST STANDARD (测试条件)

5.1 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)

Ambient temperature (环境温度) : 5℃ to 35℃

Normal humidity (正常湿度) : 45% to 85%

Air pressure (气压) : 86Kpa to 106Kpa

5.2 However if doubt arises on the decision based on the measured Values under the above-mentioned Conditions.The following conditions shall be employed: (但是在对判定产生疑问时,按下述状态实施)

Temperature (温度) : 20±2℃

Relative humidity (相对湿度) : 65±5%

Air pressure (气压) : 86Kpa to 106Kpa

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

6.1 APPEARANCE (外观)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	Initial examination of Product. (产品初步检验)	EIA-364-18 Visual and dimensional (C of C) inspection per product drawing. (根据产品图纸进行目检和尺寸检验)	Meets requirements of product drawing. (符合产品图纸要求)
	Final examination of product. (产品最终检验)	EIA-364-18. Visual inspection. (目视检验)	Meets visual requirements. (符合外观要求)

6.2 ELECTRICAL (电气)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	Low Level Contact resistance. (接触电阻)	EIA-364-23. Subject specimens mated with used module boards to 100milliamperes maximum and 20millivolts maximum open circuit Voltage. Measure all 288 positions. See Figure3. (配对连接器, 开路最大电压为 20mV 最大电流为 100mA 的电路下条件下测试, 测试 288 个位置, 见图 3)	10 milliohms maximum initial. (初始电阻 10 mΩ 最大) ΔR 10 milliohms maximum. (测试后 10 mΩ 最大变化量)
2	Insulation resistance. (绝缘电阻)	EIA-364-21 500 volts DC, 1 minute hold. Test between adjacent contacts of mounted specimens. (在相互绝缘的端子之间及端子与金属外壳之间施加电流 DC500V, 持续时间 1 分钟)	1 megohms minimum. (1 兆欧最小)
3	Withstanding Voltage. (耐电压)	EIA-364-20, Condition I 500 volts AC at sea level. Test between adjacent contacts of unmated and mounted specimens. (未配对的连接器, 在相互绝缘的端子之间及端子与金属外壳之间施加电流 DC500V, 持续时间 1 分钟)	One minute hold with no breakdown or flashover. (保持 1 分钟, 无击穿或闪断现象)

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4	Current rating. (额定电流)	EIA 364-70. Measure temperature rising by energized current . (通过通电电流测试升温)	30°C maximum temperature rise at specified current.(额定电流下最高升温 30 °C)
6.3 MECHANICAL (机械)			
ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	Reseating (修整)	Manually unplug and plug module card 3 times with latches enabled. (手动插入/拔出连接器 3 次进行, 需能锁卡)	See Note. (看到需注意)
2	Solderability, lead free (可焊性(无铅))	JESD22-B-102, Condition C, Method 1. Thirty second exposure at 190°C oven. Processing criteria: solder 260±5°C for 5 seconds. (在 190°C 烤箱中烤 30 秒, 将焊脚浸入 260±5°C 的锡炉中 5±0.5 秒取出)	95% coverage. No physical damage; contact gap within manufacturer's tolerance. (锡覆盖范围最少 95%, 无物理损伤, 接触间隙在公差范围内)
3	Vibration, random (随机震动)	EIA-364-28 Module thickness (模块厚) : 1.40mm Module weight 65±5 g with the center of gravity 22 mm from the module mating edge. (模块重 65±5g, 重心距离模块配合边 22mm) Duration (时间) : 10 minutes per axis for all 3axes on all samples. (共 3 个轴向, 每个轴向 10 分钟) Frequency range (频率范围) : 5 to 500 Hz. 5 to 20 Hz (slope): (0.01 g ² /Hz) at 5 Hz; (0.02 g ² /Hz) at 20 Hz; (斜率上升) . 20 to 500 Hz (flat): (0.02 g ² /Hz) at 20 Hz. Input acceleration is 3.13 g RMS; Random control limit tolerance: ± 3dB. See Figure 4. (加速度 3.13g, 随机控制极限容差±3dB。见图 4)	No discontinuities of 1 microsec ond or longer duration. See Note. (瞬断 1 微秒最大, 或更长, 看到注意)

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4	Mechanical shock. (机械冲击)	EIA-364-27 Module thickness (模块厚) :1.40mm Module weight 65±5 g with the center of gravity 22 mm from the module mating edge. (模块重 65±5g, 重心距离模块配合边 22mm) Profile (形状) : Trapezoidal shock of 50 g ±10% (梯形冲击 50 g ±10%) Duration (时间) : 11 ms. Minimum velocity change (最小速度变化): 67 cm/sec ± 10%. (67cm/秒±10%) Quantity (数量) : Three drops in each of 6 directions are applied to each of the three samples. (3 个样品 6 个方向各 3 次) See Figure 4. (见图 4)	No discontinuities of 1 microsecond or longer duration. See Note. (瞬断 1 微秒最大, 或更长, 看到注意)
5	Durability (耐久)	EIA-364-9. Mate and unmate specimens with 1.50 mm thick steel gauge for 25 cycles at a maximum rate of 500 cycles per hour. (以 1.5mm 厚钢规, 以 500 次/小时的速度进行 25 次插拔循环)	Rating of 25 cycles as determined by EIA-TS-364-1000.1. See Note. (25 次耐久插拔循环, 看到请注意)
6	Mating force (插入力)	EIA-364-13 Measure force necessary to mate Specimens with a 1.5 mm steel gauge at a rate of 5 mm per minute. (将试样与 1.5mm 厚钢规, 以 5mm/分钟的最大速度配对插入所需的力)	106.8 N (10.9kgf) max. (106.8N(10.9kgf) 最大)
7	Unmating force (per pin pair) (拔出力 (每 PIN))	EIA-364-13 Axial Tension/Compression machine such as an Instron Tensile Tester. Rate: 12.7 mm/min GS-005 gauge. (使用轴向拉力试验机, 将试样以 12.7mm/分钟的速度拔出所需的力)	14gf min. (14gf 最小)

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8	Contact backout wipe (端子后退力)	Fully seat daisy chain module. Pull module upward until stopped by latches while monitoring for discontinuities. (全座模块, 向上拉模块, 直到锁存停止, 同时量测信号不连续性)	No discontinuities of 1 microsecond or longer duration. (瞬断 1 微秒最大, 或更长)
9	Latch opening force. (开锁力)	To measure the force of the latch be opened by carrying the direction of the Latch. (通过带闩锁的方向来打开, 以测量闩锁的力)	32.4 N maximum per latch. See Note. (每锁 32.4N 最大, 看到请注意)
10	Contact retention. (保持力)	EIA-364-29. Apply specified load to contact tail and hold for 6 seconds. (在端子脚施加规定的载荷并保持 6 秒)	3 N minimum per pin. No movement of contact more than 0.38 mm. (每 PIN 3N 最小, 端子移动不超过 0.38mm)
11	Fork lock retention (where applicable). (叉锁保持力(如适用))	EIA-364-29 Apply specified load to fork lock and hold for 6 seconds. (将指的载荷施加到叉锁上并保持 6 秒)	13.3 N minimum per fork lock. Maximum movement of 0.38 mm. (每外叉锁 1.33N 最小, 最大移动不超过 0.38mm)
12	Connector insertion force into PCB (连接器插入 PCB 的力)	Press socket onto board at a rate of 5 mm per minute. (以 5mm/分钟的速度插入 PCB, , 所需的力)	75 N maximum.

6.4 ENVIRONMENTAL (环境)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	Thermal Shock (热冲击)	EIA-364-32, Method A, Table 2, Test Condition I. -55 and 85C, perform 5 cycles in mated condition. (测试条件 1, -55 和 85° C, 在配合条件下进行 5 次循环)	See Note. (看到需注意)

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2	Cyclic Temperature & Humidity (温湿度循环)	EIA-364-31, Method III. Subject mated and mounted specimens to 10 cycles between 25°C at 80% RH and 65°C at 50%RH. Ramp times shall be 0.5 hour with 1 hour dwell time. (样品在 25° C (80% RH) 和 65° C (50%RH) 之间进行 10 次插拔, 转换时间 0.5 小时, 停留时间 1 小时)	See Note. (看到需注意)
3	Thermal cycling (热循环)	Subject mated and mounted specimens to 500 cycles between 15±3°C and 85±3°C as measured on the specimen). Ramps times shall be a minimum of 2°C per minute. Dwell times shall ensure that the contacts reach the temperature extreme (5 minutes minimum). Humidity not controlled. (样品在 15±3°C 和 85±3°C 之间进行 500 次插拔, 转换时间分钟 3°C, 停留时间应确保触点达到极限温度 (至少 5 分钟), 湿度不限)	See Note. (看到需注意)
4	Temperature Life (温度寿命)	EIA-364-17, Method A, Test condition 4. Subject mated and mounted specimens to 105°C for 96 hours. (配对连接器置于温度 105° C 下 96 小时))	See Note. (看到需注意)
5	Mixed flowing gas (混合气体)	EIA-364-15 class IIA, 7 days exposure. Expose connectors unmated for 2/3 of the total duration, Mate each connector to the same add-in card that it was mated to in temperature life (preconditioning) and expose for the remainder of the test duration. (野外暴露 7 天。将未配对样品暴露在总持续时间的 2/3, 将每个连接器匹配到其在温度寿命 (预处理) 中配对的同一外接卡上, 并在剩余的测试持续时间内暴露)	See Note. (看到需注意)

NOTE : Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification and Requalification Test Sequence shown in Figure 2.

(产品需满足外观要求, 无物理损坏, 并满足图 2 所示产品确认和再确认测试顺序中规定的附加测试要求)

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7. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE 产品确认和再确认测试顺序：

Test or Examination	Test Group										
	1	2	3	4	5	6	7	8	9	10	11
	Test Sequence (a)										
Initial examination of product (产品初步检验)	1	1	1	1	1	1	1	1	1	1	1
Low level contact resistance. (接触电阻)	2, 6, 8	2, 7, 9, 13	2, 4, 6, 8, 10						2, 5, 7, 9	2, 4	2, 5
Insulation resistance. (绝缘电阻)		3, 10									
withstanding voltage. (耐电压)		4, 11									
Current rating. (额定电流)								2			
Reseating. (修整)	7		12						2		
Solderability, lead free. (可焊性(无铅))						2					
Vibration, random. (随机震动)		7									
Mechanical shock. (机械冲击)		9									
Durability (耐久)	4(c)	5(c)	3(c)						3(c)	3	
Mating Force (插入力)				2							
Unmating force (per pin pair) (拔出力)							3				
Latch opening force. (开锁力)				3							
Contact retention. (保持力)						3					
Fork lock retention (叉锁保持力)						2					
Connector insertion force into PCB.(连接器插入 PCB 的力)							2				
Fork lock retention (叉锁保持力)	3										
Thermal shock. (热冲击)		6									
Cyclic Temperature & Humidity. (温湿度循环)		8									
Thermal cycling (热循环)										6	
Temperature Life (温度寿命)	5		5							4	3(e)
Mixed flowing gas (混合气体)											4
Final examination of product .(产品终检)	9	14	11	4	3	4	4	3	10	5	6

NOTE (a) See paragraph 8.1.A.(见 8.1.A 段)

(b) Numbers indicate sequence in which tests are performed. (数字表示进行的测试顺序)

(c) Durability preconditioning with only 5 cycles. (仅进行 5 次循环的耐久性预处理)

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- (d) Measure contact gaps across mating interface. (测量跨配合界面的接触间隙)
- (e) specimens to 105° c for 24 hours. (试样在 105°C 下放置 24 小时)

8. QUALITY ASSURANCE PROVISIONS (质量保证条款)

8.1 Qualification Testing (测试条件)

A. Specimen Selection (样本的选择)

Specimens shall be prepared in accordance with applicable instruction sheets and shall be selected at random from current production. All test groups shall each consist of 5 specimens. (样本应按照适用的规格书进行制备，应从当前生产中随机选择。所有测试组每组由 5 个样品组成)

B. Test Sequence (测试序列)

Qualification inspection shall be verified by testing specimens as specified in Figure 2. (合格检验应通过图2列表规定的测试顺序进行验证)

8.2 Requalification Testing (测试)

If changes significantly affecting form, fit or function are made to the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering. (如果对产品或制造工艺进行了重大影响，配合或功能的更改，品保应协调对产品再验证测试，测试顺序由产品开发，品质和可靠性工程师确认的原始测试顺序的全部或部分组成)

8.3 Acceptance (验收)

Acceptance is based on verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. If product failure occurs, corrective action shall be taken and specimens resubmitted for qualification. Testing to confirm corrective action is required before resubmittal. (验收是基于对产品满足图 1 要求的验证。由于设备，测试条件或人员缺陷造成的故障不应取消产品的合格，如果发生产品故障，应采取纠正措施并重新提交样品进行确认。在重新提交前需要进行检测以确认纠正措施有效。)

8.4 Quality Conformance Inspection (质量符合性检验)

The applicable quality inspection plan shall specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification. (适用的质量检验计划应规定所采用的抽样可接受质量水平。尺寸和功能要求应符合适用的产品图纸和本规范)

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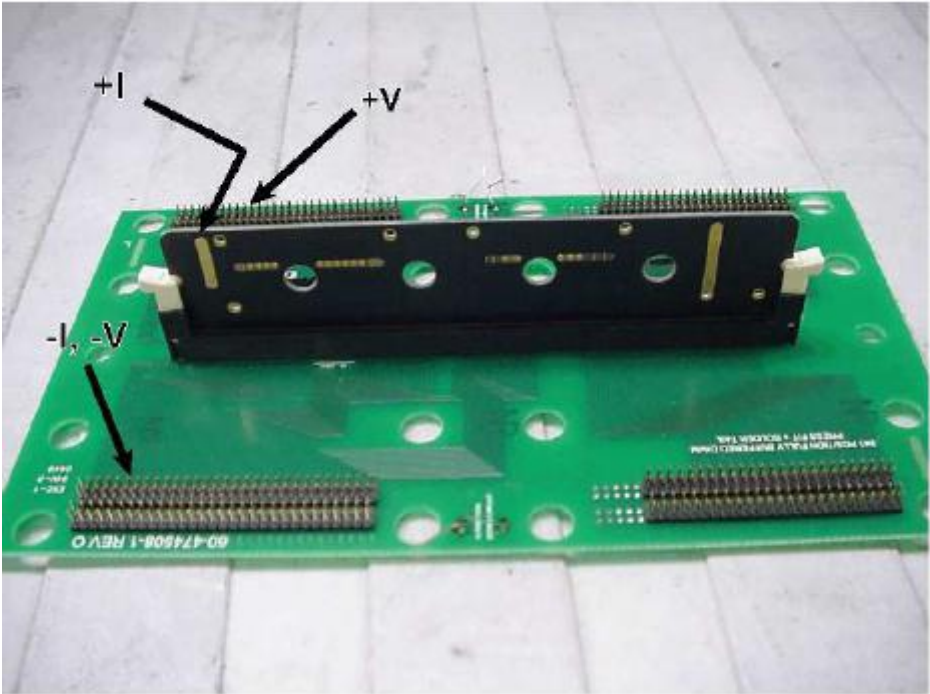


Figure 3 (reference only)
Low Level Contact Resistance

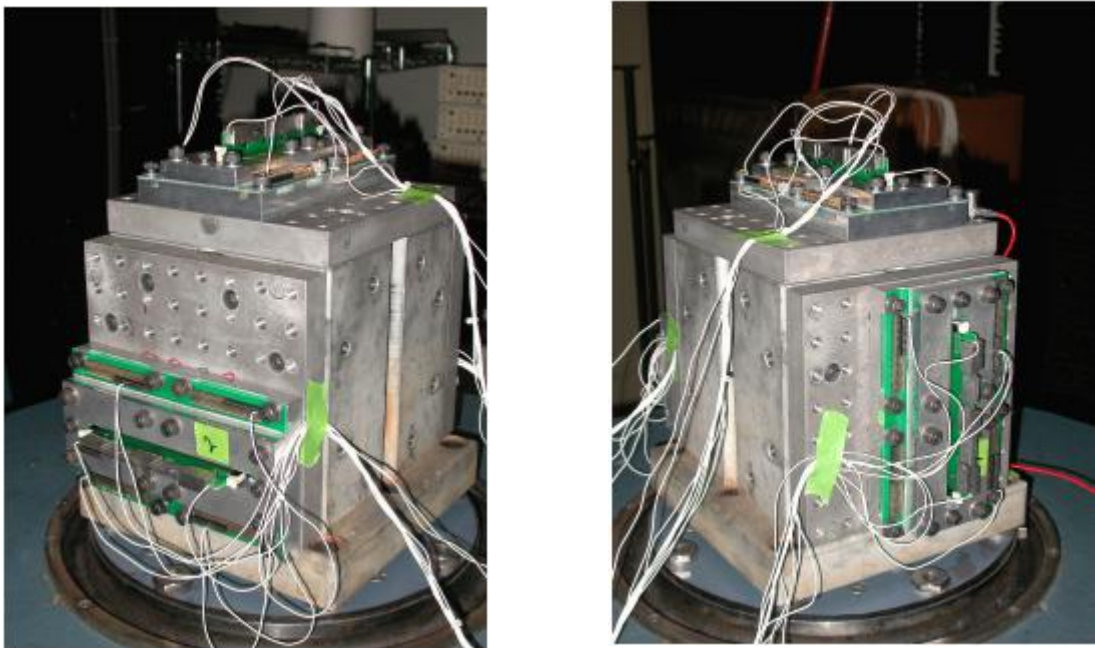
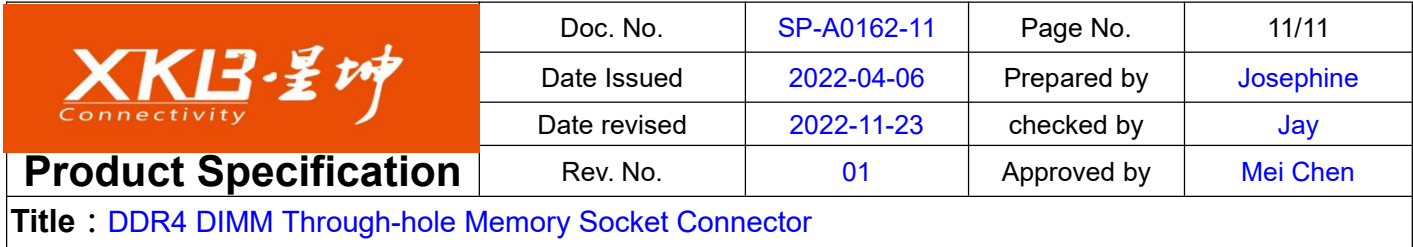


Figure 4 (reference only)
Vibration and Mechanical Shock



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