



	DESCRIPTION	DATE
A1	NEW FORM	2022/09/07

1. SCOPE

1.1. CONTENTS

This specification covers the performance, tests and quality requirements for the DDR S.O DIMM DDR5 Vertical type socket.

2. APPLICABLE DOCUMENT

The following CHUNXIN documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. 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.

3. REQUIREMENTS

3.1. DESIGN AND CONSTRUCTION

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

3.2. MATERIALS

- A. Housing : Thermoplastic, UL 94v-0.
- B. Terminal : Copper Alloy, Gold plated over nickel under plated overall.
- C. Metal Latch : Stainless Steel

3.3. RATINGS

- A. Voltage Rating : 25V AC
- B. Current Rating : 0.5A
- C. Contact Resistance : 60mΩ Max (Initial) ; Δ20mΩ max
- D. Withstanding Voltage : 300V AC
- E. Temperature : -55°C ~ +85°C



3.4. PERFORMANCE REQUIREMENT AND TEST DESCRIPTION

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in "4. TEST METHOD AND PERFORMANCE".

4. TEST METHOD AND PERFORMANCE

Unless otherwise specified, all tests and measurement should be performed under the following conditions in accordance with EIA-364.

4.1. TEST CONDITION

Temperature : 15°C ~35°C

Humidity : 45% ~ 75% RH.

Atmospheric Pressure : 86 ~ 106 kPa

4-2 APPEARANCE CHECK			
TEST ITEM		REQUIREMENT	PROCEDURE
4-2	Examination of Product	Meets requirements of product drawing. No physical damage.	Visual inspection.
4-3 ELECTRICAL REQUIREMENT			
4-3-1	LLCR Contact Resistance	Initial : 60 mΩ max. Final : 20 mΩ max change allowed	Solder connectors on PCB and mate them together, measure by applying closed circuit current of 100mA maximum at open circuit voltage of 20mV maximum. EIA-364-23B [Reference to Figure 1]
4-3-2	Dielectric withstanding Voltage	No evidence of flash over or insulation shall take place. Current leakage: 1mA Max.	300VAC for 1 minute. Test between adjacent circuits of unmated connector. EIA-364-20C
4-3-3	Insulation Resistance	Initial : 500MΩ Min. Final : 500MΩ Min.	Impressed voltage 500VDC. Test between adjacent circuits of unmated connector. EIA-364-21C



4-3-4	Temperature Rising	30°C Max. Under loaded rating current.	Mate connectors, measure the temperature rise at rated current after 0.5A/Power contact. The temperature rise above ambient shall not exceed 30°C the ambient condition is still air at 25°C. EIA-364-70 Method 2
4-4 MECHANICAL REQUIREMENT			
4-4-1	Durability (mating/unmating)	25 cycles Mating Force: 30N Max. Unmating Force: 30N Max.	Card mating/unmating sequence: (a) Insert the card at the angle specified by the manufacture. (b) Rotate the card into position. (c) Reverse the installation sequence to unmating. Operation Speed: 25.4mm pre minute. Measure the force required to mate/unmate connector. EIA-364-13 Method A [Reference to Figure 2]
4-4-2	Durability	25 cycles No evidence of physical damage.	The sample should be mounted in the tester and fully mate and unmated the rate of 25.4mm per minute. EIA-364-09
4-4-3	Durability (Preconditioning)	5 cycles No evidence of physical damage.	The sample should be mounted in the tester and fully mate and unmated the rate of 25.4mm per minute. EIA-364-09
4-4-4	Vibration	No electrical discontinuity greater than 1 μ sec shall occur. No evidence of physical damage.	15 minutes in each of 3 mutually perpendicular directions. Both mating halves should be rigidly fixed so as not to contribute to the relative motion of one contact against another. EIA-364-28, Test condition VII, Test condition latter D



4-4-5	Mechanical Shock	No electrical discontinuity greater than 1 μ sec shall occur. No evidence of physical damage.	50G, 11ms Half sine No. of Drops: 3drops each to normal and reversed directions of X, Y, and Z axes, totally 18 drops. EIA-364-27B
4-4-6	Latch Retention Force	8N /pos Min.	Place a connector on the push-pull machine, then apply a force on a contact head and push the latch to the opposite direction of the latch spring insertion at the speed of 25 \pm 3mm/min. Measure the force when the latch spring dislodges from insulator.
4-4-7	Contact Retention Force	1 N/pos. Min.	Place a connector on the push-pull machine, then apply a force on a contact head and push the contact to the opposite direction of the contact insertion at the speed of 25 \pm 3 mm/min. Measure the force when the contact dislodges from insulator.
4-5 ENVIRONMENTAL REQUIREMENTS			
4-5-1	Humidity Temperature Cycle	20 m Ω max change allowed (Final)	Mated Connector. Initial measurement, cold shock and vibration. Cycle the connector between 25 \pm 3 $^{\circ}$ C at 80 \pm 3%RH and 65 \pm 3 $^{\circ}$ C at 50 \pm 3%RH. Ramp times should be 0.5 hour and dwell times should be 1.0 hour. Dwell times start when the temperature and humidity have stabilized within the specified levels. Perform 24 such cycles. EIA-364-31,method III
4-5-2	Thermal Shock	20 m Ω max change allowed (Final)	Mated Connector. EIA-364-32,test condition I , 10 cycles



4-5-3	Temperature Life	20 mΩ max change allowed (Final)	Mated Connector, 105°C, 120 hours EIA-364-17,method A
4-5-4	Temperature Life (preconditioning)	20 mΩ max change allowed (Final)	Mated Connector, 105°C, 72 hours EIA-364-17,method A
4-5-5	Reseating	20 mΩ max change allowed (Final)	Manually mating/unmating the connector. Perform 3 such cycles.
4-5-6	Reflow Soldering Heat Resistance	No evidence of physical damage.	Pre-heat: 150~215°C, 30~120 sec. Reflow: 230°C Min, 40 sec Min. Peak temp: 260°C Max, 10 sec Max. [Reference to Figure 3]
4-5-7	Solderability	Solder coverage 95% MIN.	Solder 5±0.5 seconds. Solder temperature:245±5°C EIA-364-52

4.6. TEST SEQUENCE

Test or Examination		Test Group										
		A	B	C	D	E	F	G	H	I	J	K
		Test Sequence (a)										
1	Examination of Product	1	1,7	1,8	1,6	1	1	1,7	1,10	1,8	1,3	1,3
2	LLCR (Contact Resistance)		2,6	2,5,7	2,5				2,5,7,9	2,5,7		
3	Dielectric withstanding Voltage							2,5				
4	Insulation Resistance							3,6				
5	Temperature Rising	2										
6	Mating/Unmating Force		3,5									
7	Durability		4									
8	Durability (Preconditioning)			3	3				3	3		
9	Vibration			6								



Test or Examination		Test Group										
		A	B	C	D	E	F	G	H	I	J	K
		Test Sequence (a)										
10	Mechanical Shock				4							
11	Latch Retention Force					2						
12	Contact Retention Force						2					
13	Cycling Temperature & Humidity							4	6			
14	Thermal Shock								4			
15	Temperature Life									4		
16	Temperature Life (Preconditioning)			4								
17	Reseating								8	6		
18	Reflow Soldering Heat Resistance										2	
19	Solderability											2
Quantities of Samples		5	5	5	5	5	5	5	5	5	5	5

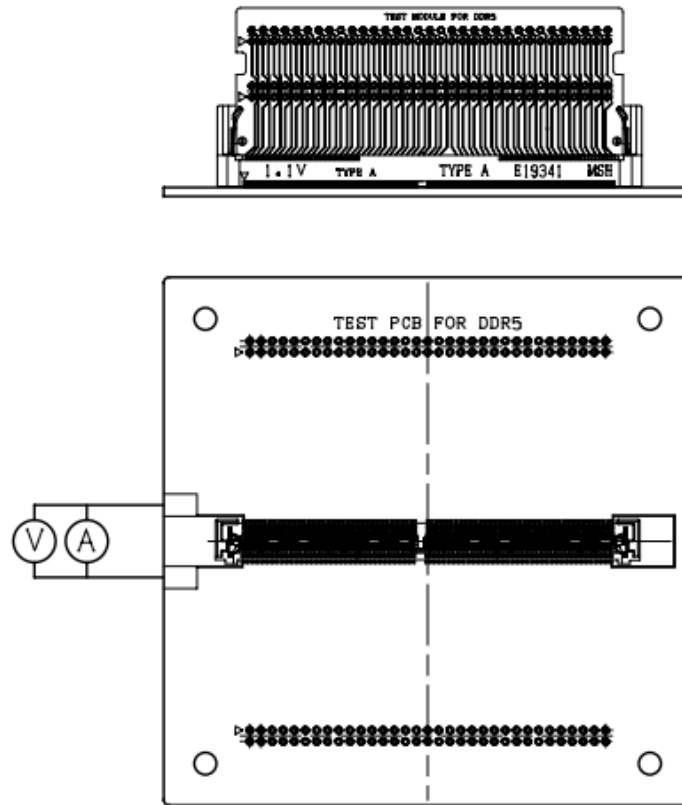
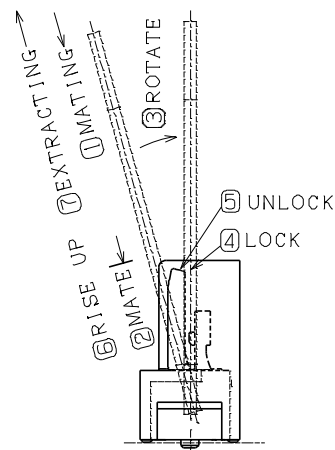


Figure 1

Low Level Contact Resistance



HOW TO MATE AND UNMATE

MATE ① - ④

UNMATE ⑤ - ⑦

Figure 2
mating/unmating

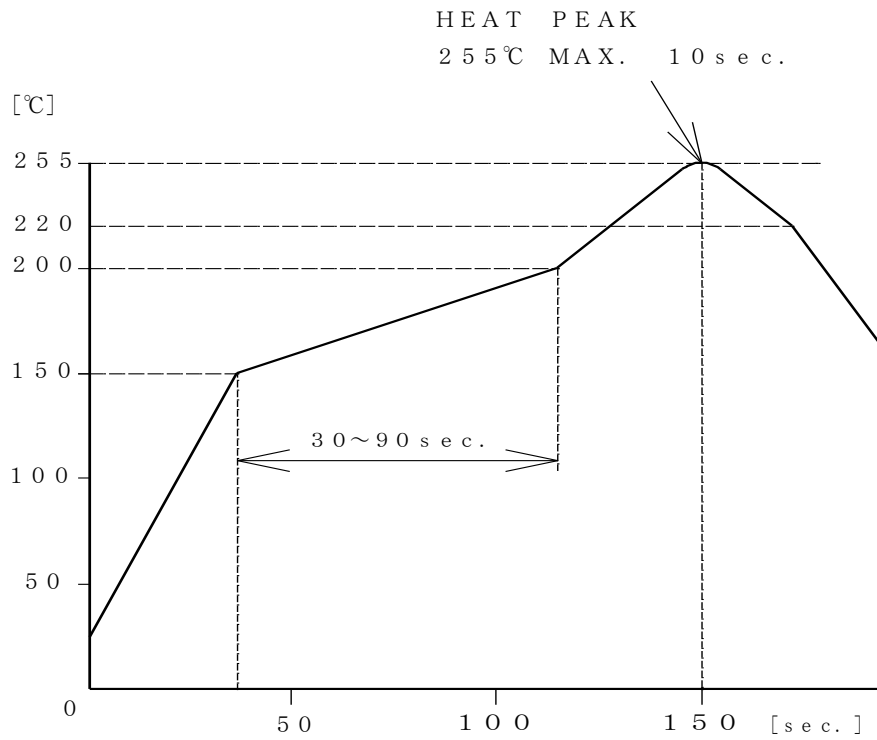


Figure 3
Resistance to Flow Solder Heat