DDR4 SODIMM Socket
0.5mm Pitch 260Pos

1. Introduction

1.1 Testing was performed on DDR4 SODIMM SOCKET 260P to determine if it meets the requirement of Product Specification , 108-115122 Rev.A.

1.2 Scope

This report covers the electrical, mechanical and environmental performance requirements of the DDR4 SODIMM SOCKET 260P.

1.3 Conclusion

DDR4 SODIMM SOCKET TH 260P Type meets the electrical, mechanical and environmental performance requirements of Product Specification, 501-115133 Rev.A

1.4 Test Samples

Samples were taken randomly from current production. The following samples were used.

Test Group	Quantity	PN	Description	
1、2、3、4、5、6、7、8、9、10、12	5ea.	*-2309407-*	4H STD	DDR4 SODIMM SOCKET 260P
		-2309408-	4H RVS	
		-2309409-	5.2H STD	
		-2309410-	5.2H RVS	

Fig. 1

2. Test Contents

NO.	Test Items	Requirements	Judgment
2.1	Examination of Product	Visual, inspection No physical damage.	Acceptable
	Electrical Requirements		
2.2	Termination Resistance (Low Level)	Standard Type: 50mΩ Max.（Initial） ΔR＝20mΩMax.（Final）	Acceptable
2.3	Insulation Resistance	Impressed voltage 500V DC for 1 minute. Test between adjacent circuits of unmated connector. 50MΩ Min.	Acceptable
2.4	Dielectric withstanding Voltage	250 V AC for 1 minute. Test between adjacent circuits of unmated connector. No creeping discharge nor flashover shall occur. Current leakage: 0.5mA Max.	Acceptable
2.5	Current carrying capability / Temperature Rising	30℃ Max. (Only 6 contacts) Load with 0.5A	Acceptable

Fig. 2 （to be continued）

Mechanical Requirements			
2.6	Reseating	No physical damege after 3 times.	Acceptable
2.7	Solderability, lead free	95% coverage. No physical damage; contact gap within manufacturer's tolerance. JESD22-B-102, Condition C, Method 1.	Acceptable
2.8	Resistance to Solder Heat	Reflow condition: Comply with JEDEC standard (J-STD-020C) Peak: 265±5℃ 10s	Acceptable
2.9	Vibration (Random)	Vibration Frequency: 10-55-10 Hz traversed in 1 minute Amplitude:1.52mm Vibration Direction: In each of 3 mutually pependicular Planes Duration: 2 hours 100mA applied. No electrical discontinuity greater than 1 μ sec shall occur.	Acceptable
2.10	Mechanical shock	Module weight 5 g Profile: Trapezoidal shock of 50 g ± 10%. Waveform: Half sine Duration: 11 m sec. Quantity: Three drops in each of 6 directions are applied to each of the three samples. No electrical discontinuity greater than 1 μ sec shall occur.	Acceptable
2.11	Durability	Repeated insertion and extraction of P.C.B to and from the connector with the turns to lock it and then unlock it for 50 cycles at a maximum rate of 500 cycles per hour.	Acceptable
2.12	Mating force	Operation Speed: 25.4 mm/min. Measure the force required to mate connectors. (In this test, the force required to turn PCB before it engages on lacking, is excluded.)	Acceptable
2.13	Unmating force	Operation Speed: 25.4 mm/min. Measure the force required to unmate connectors.	Acceptable

Fig. 2 （to be continued）

Environmental Requirements			
2.14	Thermal Shock	-55 and 85℃, perform 5 cycles in mated condition.	Acceptable
2.15	Cyclic Temperature & Humidity	Subject mated and mounted specimens to 10 cycles between 25℃ at 80% RH and 65℃ at 50% RH. Ramp times shall be 0.5 hour with 1 hour dwell time.	Acceptable
2.16	Temperature Life	Subject mated and mounted specimens to 85℃ for 250 hours.	Acceptable
2.17	Mixed flowing Gas	EIA-364-65, Class IIA. 30u" Au version (field life 7 years): Five specimens unmated for 160 hours, mated for 80 hours. Five specimens mated for 240 hours. Store module cards at laboratory ambient during the unmated portion of the exposure. 15u" Au version (field life 5 years): Five specimens unmated for 112 hours, mated for 56 hours. Five specimens mated for 168 hours. Store module cards at laboratory ambient during the unmated portion of the exposure.	Acceptable
2.18	Salt Spray	Subject mated connectors to 5 % salt concentration 35℃ for 48 hours.	Acceptable

Fig. 2（End）

3. Product Qualification and Requalification Test Sequence

Test Examination	Test Group											
	1	2	3	4	5	6	7	8	9	10	11(c)	12(d)
	Test Sequence (a)											
Examination of Product	1,7	1,9	1,6	1,5	1,5	1,5	1,5	1,3	1,3	1,3	1,5	1,5
Contact Resistance (Low Level)		2,8	2,5	2,4	2,4	2,4	2,4				2,4	2,4
Dielectric withstanding Voltage	3,6											
Insulation Resistance	2,5											
Temperature rising								2				
Mating force		3,7										
Unmating force		4,6										
Durability		5										
Vibration			3									
Mechanical Shock			4									
Solderability									2			
Resistance to Reflow Soldering Heat										2		
Thermal Shock				3								
Temperature Humidity Cycling	4				3							
Temperature Life						3						
Salt Spray							3					
Industrial SO2 Gas (c)											3	
Mixed Flowing Gas (d)												3

NOTE

(a) Numbers indicate sequence in which tests are performed;

(b) Discontinuities shall not take place in this test group, during tests;

(c) Apply to GF&5u"&10u" Au type.

(d) Apply to 15"&30u" Au type;

Figure 3

4. TEST RESULT

4.1 TEST RESULT For Standard Type

Group	Test Item	N	Condition	Test Result			Requirement	Judgement
				Max	Min	Ave		
1	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Insulation Resistance	5	Initial	$7.04\times10^{11}\Omega$	$2.90\times10^{11}\Omega$	$5.81\times10^{11}\Omega$	250M Min	Acceptable
	Dielectric Withstanding voltage	5	Initial	No creeping discharge nor flashover occurred			NO abnormalities	Acceptable
	After Temperature-Humidity cycling (Insulation Resistance)	5	Final	$4.36\times10^{12}\Omega$	$1.59\times10^{12}\Omega$	$2.91\times10^{12}\Omega$	$5\times10^{7}\Omega$ Min	Acceptable
	After Temperature-Humidity cycling (Dielectric Withstanding voltage)	5	Final	No creeping discharge nor flashover occurred			NO abnormalities	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
2	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Termination Resistance	1300	Initial	31.74mΩ	16.84mΩ	22.51mΩ	50mΩ Max	Acceptable
	Connector mating force	5	Initial	32.16 N	24.91 N	28.80 N	40N Max	Acceptable
	Connector unmating force	5	Initial	14.56 N	9.56 N	12.45 N	1N Min	Acceptable
	Connector mating force	5	Final	29.50 N	19.84 N	25.77 N	40N Max	Acceptable
	Connector unmating force	5	Final	13.28 N	9.31 N	11.53 N	1N Min	Acceptable
	After Durability (Termination Resistance)	1300	Final	32.23mΩ	15.58mΩ	22.77mΩ	70mΩ Max	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
3	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Termination Resistance	1300	Initial	44.90mΩ	20.45mΩ	33.53mΩ	50mΩ Max	Acceptable
	Vibration (Continuity or Discontinuity)	5	Final	No discontinuities of 0.1 u sec or longer duration occurred			NO abnormalities	Acceptable
	Physical Shock (Continuity or Discontinuity)	5	Final	No discontinuities of 0.1 u sec or longer duration occurred			NO abnormalities	Acceptable

	After Vibration &shock test (Termination Resistance)	1300	Final	35.95mΩ	18.62mΩ	30.93mΩ	70mΩ Max	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
4	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Termination Resistance	1300	Initial	35.27mΩ	17.29mΩ	22.87mΩ	50mΩ Max	Acceptable
	After Thermal Shock (Termination Resistance)	1300	Final	49.48mΩ	27.99mΩ	34.01mΩ	70mΩ Max	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
5	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Termination Resistance	1300	Initial	40.13mΩ	30.94mΩ	34.34mΩ	50mΩ Max	Acceptable
	After Temperature Humidity Cycling(Termination Resistance)	1300	Final	38.52mΩ	31.69mΩ	34.01mΩ	70mΩ Max	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
6	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Termination Resistance	1300	Initial	47.92mΩ	17.12mΩ	23.00mΩ	50mΩ Max	Acceptable
	After Temperature Life (Termina Resistance)	1300	Final	50.79mΩ	20.65mΩ	33.80mΩ	70mΩ Max	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
7	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Termination Resistance	1300	Initial	41.77mΩ	26.96mΩ	34.14mΩ	50mΩ Max	Acceptable
	After Salt Spray (Termination Resistance)	1300	Final	68.77mΩ	38.96mΩ	50.14mΩ	70mΩ Max	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable

Group	Test Item	N	Condition	Test Result	Requirement	Judgement

				Max	Min	Ave		
8	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Temperature Rising	5	Final	29.12°C	21.77°C	26.10°C	30°C	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
9	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Solderability	5	Final	Solderability area had a minimum of 95% solder coverage.			NO abnormalities	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
10	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Resistance to Reflow Soldering Heat	5	Final	No physical damage occurred			NO abnormalities	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable
12	Examination of Product	5	Initial	No physical damage occurred			NO abnormalities	Acceptable
	Termination Resistance	1300	Initial	30.19mΩ	20.70mΩ	22.23mΩ	50mΩ Max	Acceptable
	After MFG (Termination Resistance)	1300	Initial	33.25mΩ	22.26mΩ	25.08mΩ	70mΩ Max	Acceptable
	Examination of Product	5	Final	No physical damage occurred			NO abnormalities	Acceptable

Fig. 4 （END）