1.Introduction

1. 1. Testing was performed on the LGA 257 to determine if it meets the requirement of Product Specification , 108-115139 REV.A

1. 2. Scope

This report covers the electrical, mechanical and environmental performance requirements of the LGA 3647. The qualification testing for standard type was performed between 10 Dec 2017 and 8 Jan 2018.

1. 3. Conclusion

LGA 257 meets the electrical, mechanical and environmental performance requirements of Product Specification, 108-115139 REV.A

1. 4. Test Samples

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

Part Number	Description
2319757-1	DUAL LGA,257 POS, DMD SOCKET

Fig. 1

2. Test Contents

No.	Test Items	Requirements	Judgement
2.1	Examination of product	Visual Inspection No physical damage	Acceptable
		Electrical Requirements	
2.2	Termination resistance (Low level)	30mΩ max for initial △ R=10mΩ max after test.	Acceptable
2.3	Dielectric withstanding voltage	360 Vrms, 1 minute Current leakage : 0.5mA Max.	Acceptable
2.4	Insulation resistance	Impressed voltage 500 VDC. 800MΩ Min.	Acceptable
2.5	Current Rating	0.5A min for arrays of 4X4 and 6X6 contacts.	Acceptable
		Mechanical Requirements	
2.6	Durability (Repeated mating / unmating)	Operation speed:8 cycle/min. No. of cycles: 30 cycles Refer to table 1	Acceptable

Figure. 2 (continued)

Environmental Requirements			
2.7	Vibration, random.	Vibration Frequency: 10 to 2000Hz (Random) Accelerated Velocity: 30.38 m/s^2 (3.1G),rms. Vibration Direction: In each of 3 mutually perpendicular planes Duration: 15 minute each Refer to table 1	Acceptable
2.8	Physical shock	Accelerated velocity: 294 m/s^2 (30 G) Waveform: Halfsine Duration: 11 m sec. Number of drops: 3 drops each to normal and reversed directions of X, Y and Z axes, totally 18 drops. Refer to table 1	Acceptable
2.9	Temperature humidity	Subject mated interposers to 240hours of 25℃to 85℃ exposure,2 hours dwell at each temperature, 2hours transition time ,with 80+/-2% RH at 25℃，47% RH max at 85℃ Refer to table 1	Acceptable
2.10	Temperature life (Heat aging)	Mated, 105 °C, / 533 hours Refer to table 1	Acceptable
2.11	Thermal Shock	Subject mated interposers to 10cycles of -55℃ to 85℃ exposure,60 minutes per temperature. EIA-364-32.	Acceptable

Figure. 2
(end)

Chain numbers are subject to change on actual testing

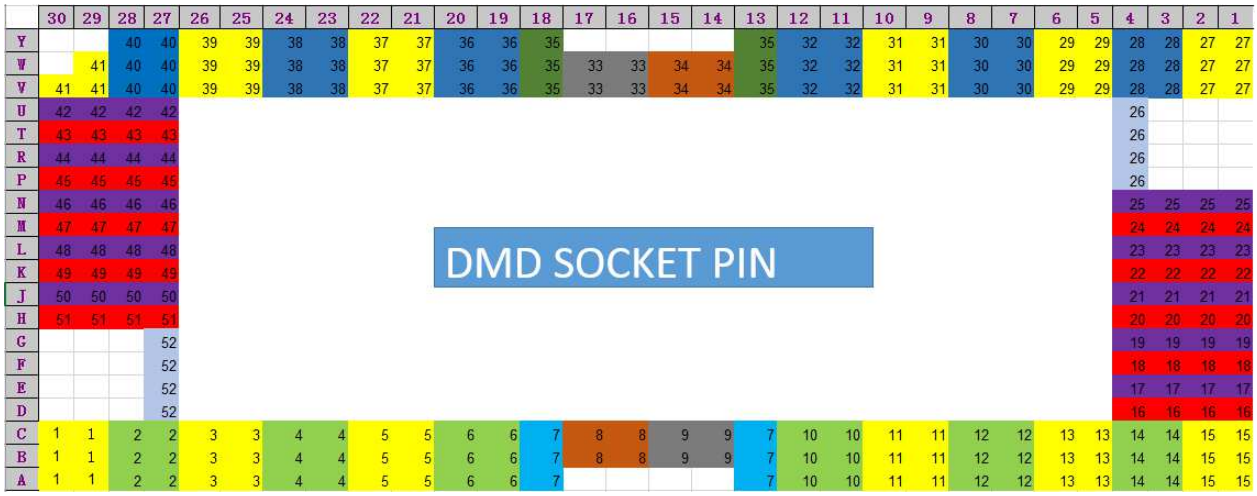

Figure 3
Location of termination resistance daisy chain, socket top side view.

3. Test Sequence

Table 2

Test examination / Test sequence	Test Group						
	1	2	3	4	5	6	7
Test sequence (a)							
Examination of product	1,7	1,5	1,5	1,10	1,5	1,5	1,4
Termination resistance (Low Level)	2,4,6	2,4	2,4		2,4	2,4	
Dielectric withstanding voltage				2,5,8			
Insulation resistance				3,6,9			
Vibration (Low frequency)	5						
Physical shock	3						
Durability (Repeated mate/unmating)			3				
Temperature humidity		3		7			
Temperature life (Heat aging)					3		
Thermal shock				4		3	
Contact normal force							2
Current Rating							3

4.Test result

Group	Test Item	N	Condition	Test Result			Requirement	Conclusion
				Max	Min	Ave		
1	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec
	LLCR	257	Initial	21.2 mΩ	8.0 mΩ	21.18 mΩ	30mΩ Max	Meet Spec
	Physical Shock	5	Final	No physical damage			No abnormalities	Meet Spec
	△LLCR	257	Final	7.8 mΩ	-2.4 mΩ	1.87 mΩ	10mΩ Max	Meet Spec
	Vibration	5	Final	No physical damage			No abnormalities	Meet Spec
	△LLCR	257	Final	6.9 mΩ	-7.7 mΩ	-1.38 mΩ	10mΩ Max	Meet Spec
	Examination of Product	5	Final	No physical damage			No abnormalities	Meet Spec
2	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec
	LLCR	257	Initial	26.3 mΩ	15.3 mΩ	20.1 mΩ	30mΩ Max	Meet Spec
	Temperature Humidity (240H)	5	Final	No physical damage			No abnormalities	Meet Spec
	△LLCR	257	Final	-1.55 mΩ	-12.40 mΩ	-4.14 mΩ	10mΩ Max	Meet Spec
	Examination of Product	5	Final	No physical damage			No abnormalities	Meet Spec
3	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec
	LLCR	2520	Initial	25.70 mΩ	18.0 mΩ	21.06 mΩ	30mΩ Max	Meet Spec
	Durability	5	Final	No physical damage			No abnormalities	Meet Spec
	△LLCR	2520	Final	4.5 mΩ	-2.8 mΩ	0.75 mΩ	10mΩ Max	Meet Spec
	Examination of Product	5	Final	No physical damage			No abnormalities	Meet Spec
4	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec
	Withstanding Voltage	25	Initial	No creeping discharge nor flashover occurred.			No abnormalities	Meet Spec
	Insulation Resistance	25	Initial	8.13xE11	1.18xE11	3.61xE11	800MΩ Min	Meet Spec
	Thermal Cycling(10X)	5	Final	No physical damage			No abnormalities	Meet Spec
	Withstanding Voltage	25	Final	No creeping discharge nor flashover occurred.			No abnormalities	Meet Spec
	Insulation Resistance	25	Final	9.77xE11	2.14xE11	5.21xE11	800MΩ Min	Meet Spec
	Temperature Humidity	5	Final	No physical damage			No abnormalities	Meet Spec
	Withstanding Voltage	25	Final	No creeping discharge nor flashover occurred.			No abnormalities	Meet Spec
	Insulation Resistance	25	Final	9.89xE11	1.00xE10	3.88xE10	800MΩ Min	Meet Spec
	Examination of Product	5	Final	No physical damage			No abnormalities	Meet Spec
5	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec

	LLCR	257	Initial	24.20 mΩ	15.30 mΩ	20.00 mΩ	30mΩ Max	Meet Spec
	Temperature Life (533H)	5	Final	No physical damage			No abnormalities	Meet Spec
	△LLCR	257	Final	9.40 mΩ	-5.8 mΩ	1.59 mΩ	10mΩ Max	Meet Spec
	Examination of Product	5	Final	No physical damage			No abnormalities	Meet Spec

Group	Test Item	N	Condition	Test Result			Requirement	Conclusion
				Max	Min	Ave		
6	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec
	LLCR	257	Initial	24.22 mΩ	15.27 mΩ	20.0 mΩ	30mΩ Max	Meet Spec
	Thermal Shock	5	Final	No physical damage			No abnormalities	Meet Spec
	△LLCR	257	Final	0.41 mΩ	-6.87 mΩ	-2.80 mΩ	10mΩ Max	Meet Spec
	Examination of Product	5	Final	No physical damage			No abnormalities	Meet Spec
7	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec
	Contact normal force	25	Final	32.4gf	30.7gf	31.34gf	20gf MIN	Meet Spec
	Current Rating	5	Final	21.83℃	14.12℃	16.85℃	△30℃ MAX	Meet Spec
	Examination of Product	5	Initial	No physical damage			No abnormalities	Meet Spec

End

REV	REV. RECORD	PREPARED		CHECK		APPROVAL	
A	RELEASED	Tony Zhu	15th Jan 18	Bill Lv	15th Jan 18	Simon Li	15th Jan 18