



Chuangxin Online Test Center Laboratory

Add: F/r 401 Building A, Ying Da Feng industrial No,393,Jihua Rd.LongGang
Dis. Shenzhen China
Tel: 0755-83765367 Email: engineer@iclab-cn.com



Report No:	SZ09092021019
Date:	2021/09/09
Page:	1/11

Project Inspection Report

Company : NA
Address : NA
Sample Name : XC6VLX240T-2FFG1156I
Manufacture : XILINX
Date Code : 2101
Package Type : BGA-1156
Sample Number : 8 PCS
Check Number : 8 PCS
Date of Received : 09/06/2021
Date of Tested : 10:00/09/07/2021 ~ 10:50/09/07/2021

WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

Inspected by Engineer
Wing

Reviewed by Project Manager
Lucy

Note:

1. This report will be invalid if reproduced in whole or in part.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used separately.
3. This report is only valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.
5. This report is only responsible for the samples tested.



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Report No:	SZ09092021019
Date:	2021/09/09
Page:	2/11

Items test

- External visual inspection
- Pin Correlation Test
- Programming test
- Solder ability Analysis
- Radiography (X-ray)
- ROHS test
- Key Functional Testing (KFT)
- Baking
- Tape and Reel
- Internal visual inspection
- Top permanency test

Methods & Equipment

1.1 Applicable Standard

- MIL-STD-883L-2019 2009.14

1.2 Optical Microscope

- Equipment Spec:
Top view: FINIAL Hi-scope System SEZ-260: X7 ~ X45

1.3 Digital Caliper

- Equipment Spec:
MASTERPROOF : Standard Digital Caliper 0-150mm

1.4 Testing Environment

- Ambient Temperature: 25±5°C
- Relative Humidity: 45%-65% RH

1.5 Testing Base

- [XILINX XC6VLX240T-2FFG1156I]

<https://datasheet.datasheetarchive.com/originals/dk/DKDS-24/460837.pdf>



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Report No:	SZ09092021019
Date:	2021/09/09
Page:	3/11

Analysis Summary

External Visual Inspection:

Applicable Standard: MIL-STD-883L 2019 2009.14

External Visual Inspection on 8 PCS samples marked with D/C 2101. BGA and side show minor indentation on all inspected. Evidence of different marking type and unaligned marking was found on all inspected. Devices package and dimension matched to manufacturer's specification.

All devices failed the external visual inspection.

Specification dimension:

D: 35.00 BSC MM

E: 35.00 BSC MM

A: 2.70 - 3.50 MM

Measurement dimension:

D: 35.11 MM

E: 35.04 MM

A: 3.04 MM



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Report No:	SZ09092021019
Date:	2021/09/09
Page:	4/11

External Visual Inspection Result:

External Visual Criteria	Yes/No	Result
Mix-up	No	Pass
Top Scratches	No	Pass
Bottom Scratches	No	Pass
Residues	No	Pass
Indentation	Yes	Exist
Contamination	No	Pass
Cracks	No	Pass
Copper defect	No	Pass
Oxidization	No	Pass
Coplanarity	Yes	Pass
Different Marking Type	Yes	Failed
Unaligned Marking	Yes	Failed

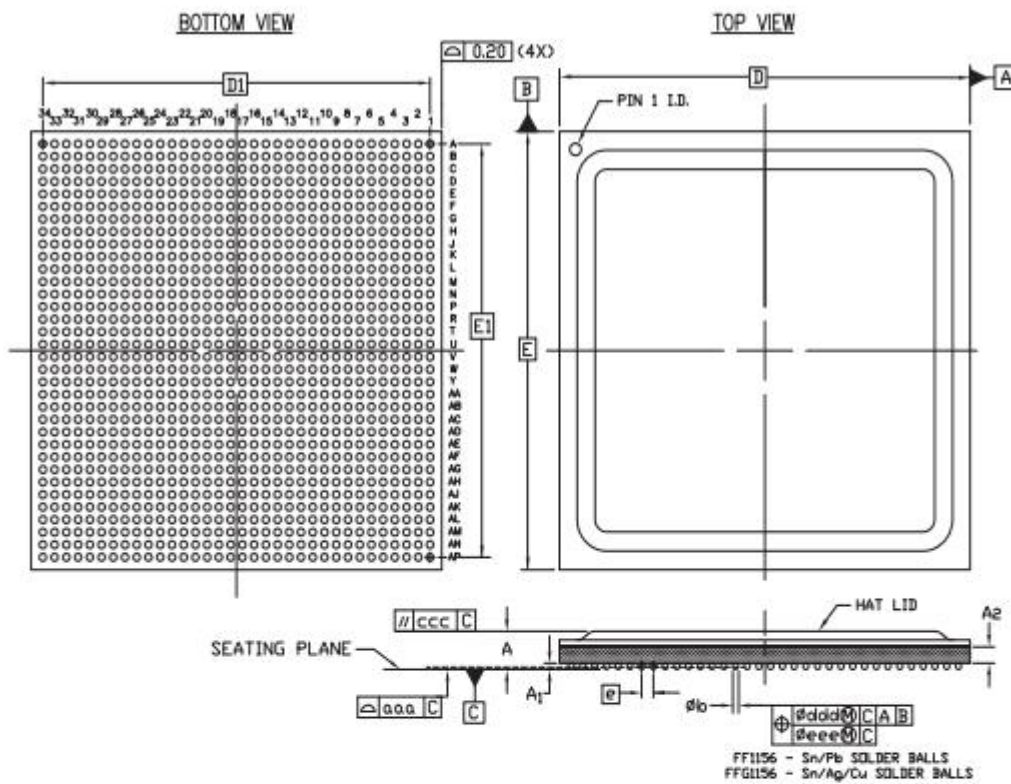


Report No:	SZ09092021019
Date:	2021/09/09
Page:	5/11

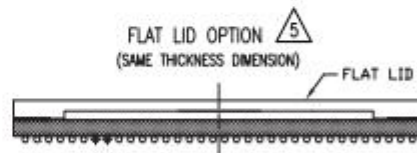
1. Device Description:

Virtex®-6 FPGAs are available in -3, -2, -1, and -1L speed grades, with -3 having the highest performance. Virtex-6 FPGA DC and AC characteristics are specified in commercial, extended, industrial, and military temperature ranges. Unless noted, the Virtex-6Q FPGA DC and AC characteristics are equivalent to the commercial specifications.

2. Package Dimensions:



SYMBOL	MILLIMETERS			NOTE
	MIN.	NOM.	MAX.	
A	2.70	<i>M</i>	3.50	4
A ₁	0.40	0.50	0.60	
A ₂	0.90	<i>M</i>	1.50	
$\frac{D}{E}$	35.00 BASIC			2
$\frac{D}{E}$	33.00 REF			
$\frac{E}{E}$	1.00 BASIC			4
ϕb	0.50	0.60	0.70	
aaa	<i>M</i>	<i>M</i>	0.20	
ccc	<i>M</i>	<i>M</i>	0.35	
ddd	<i>M</i>	<i>M</i>	0.30	
eee	<i>M</i>	<i>M</i>	0.10	2
M	34			



NOTES:

- ALL DIMENSIONS AND TOLERANCES CONFORM TO ANSI Y14.5M-1994
- SYMBOL 'M' IS THE BALL MATRIX SIZE
- CONFORMS TO JEDEC MS-034-AAR-1
- ACTUAL SOLDER BALL COUNT = 1156
- FLAT LID WILL BE USED ONLY FOR THE FOLLOWING DEVICES, XC6VSK475T, XC6VSK315T, and XC6VLX365T
- THIS PACKAGE IS ONLY USED FOR VIRTEX®-6 FPGAS REFER TO PK384 FOR THE MECHANICAL DRAWING OF THE FF1156 PACKAGE USED BY VIRTEX-5 FPGAS



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Report No:	SZ09092021019
Date:	2021/09/09
Page:	6/11

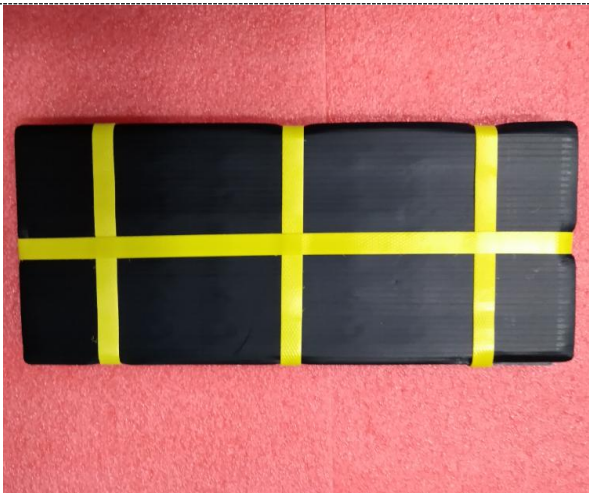
3. Receiving Inspection:

Gross Weight	490 g	Parts Total	8 PCS
Number Of Boxes	N/A	Full Label	Non Present
Package type	Tray	Moisture protection	Acceptable
MSL	N/A	ESD protection	Acceptable

Received View-1



Received View-2



Received View-3



Received View-4





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Report No:	SZ09092021019
Date:	2021/09/09
Page:	7/11

4. External Visual Inspection:

Applicable Standard: MIL-STD-883L 2019 2009.14

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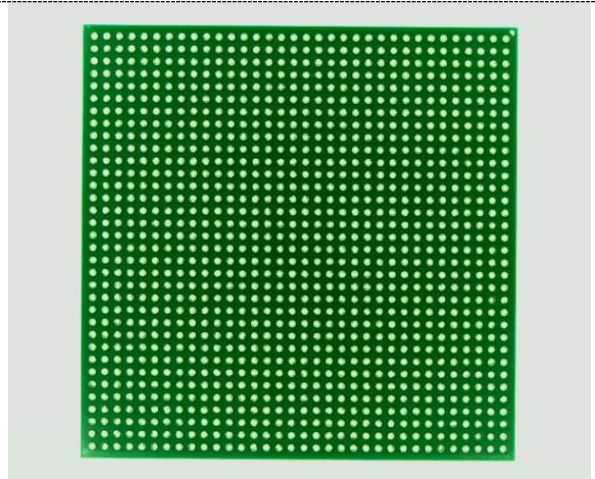


Report No:	SZ09092021019
Date:	2021/09/09
Page:	8/11

Top



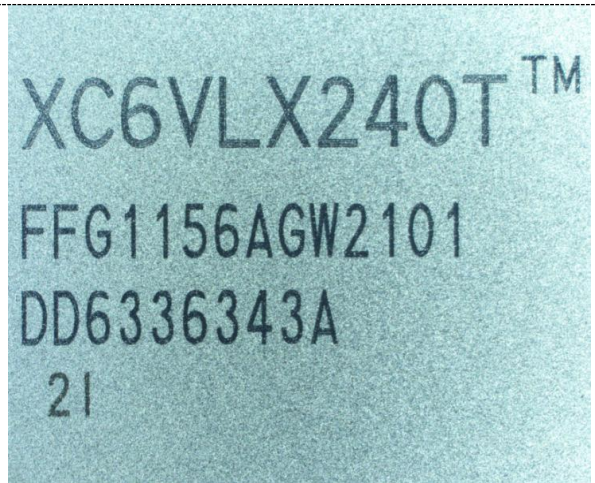
Bottom



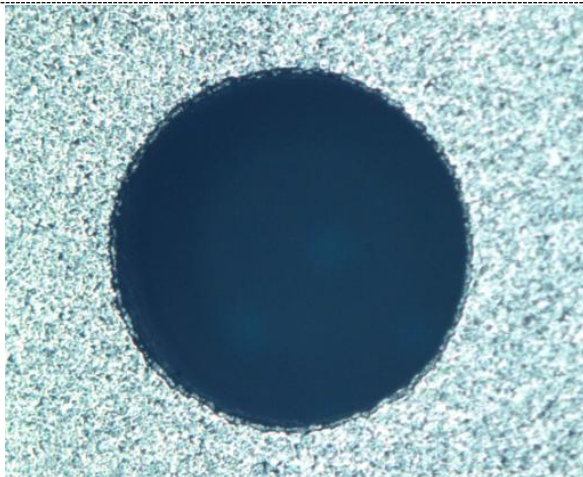
Side



Laser Marking



Top Pin



Bottom Pin





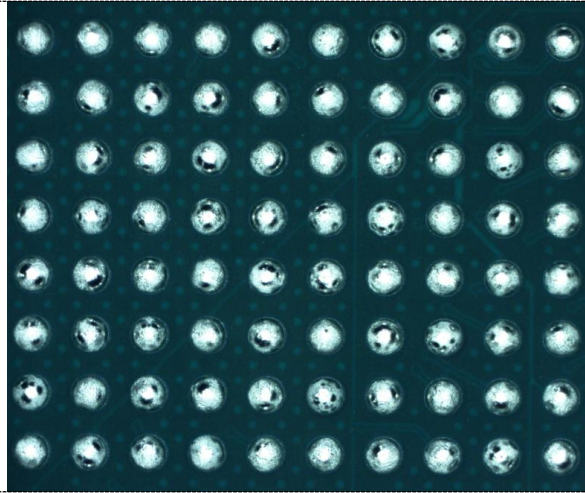
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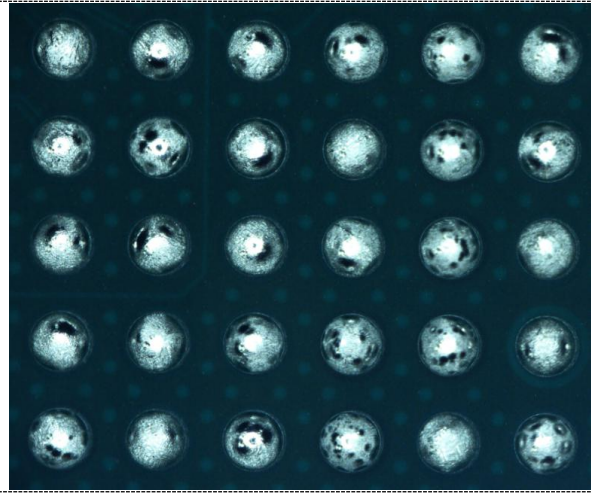


Report No:	SZ09092021019
Date:	2021/09/09
Page:	9/11

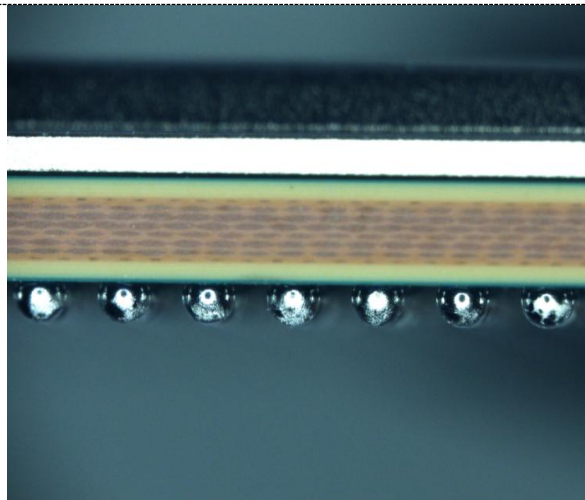
BGA-1



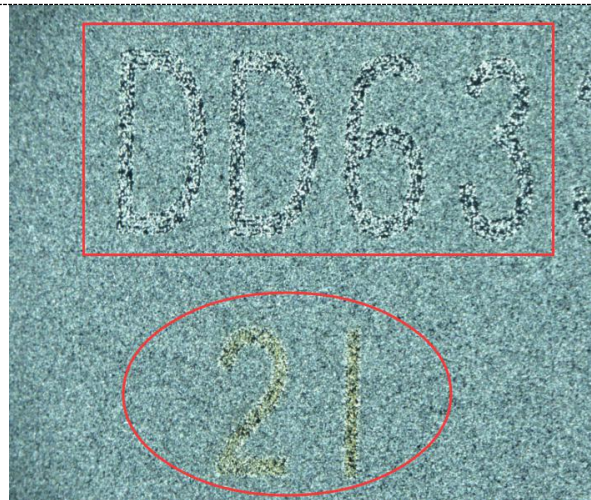
BGA-2



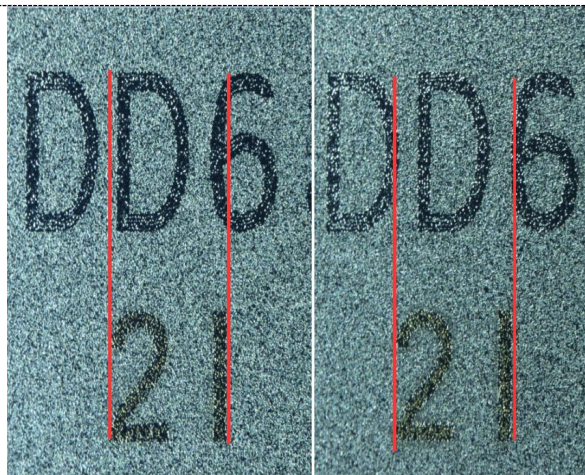
Side BGA



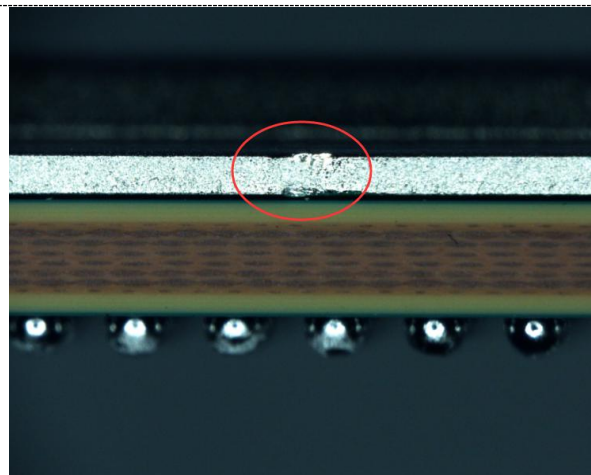
Different Marking Type



Unaligned Marking

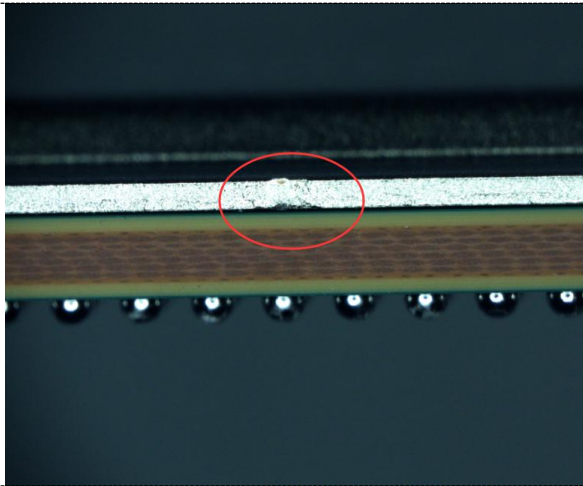


Side Minor Indentation-1

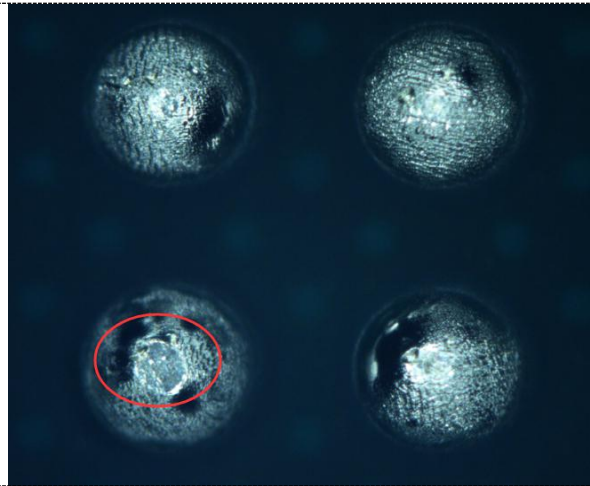


Report No:	SZ09092021019
Date:	2021/09/09
Page:	10/11

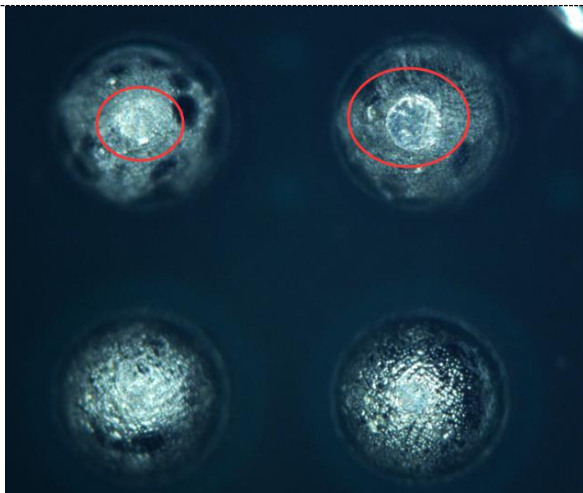
Side Minor Indentation-2



BGA Minor Indentation-1



BGA Minor Indentation-2



D = 35.11 MM



E = 35.04 MM

A = 3.04 MM



End



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Report No:	SZ09092021019
Date:	2021/09/09
Page:	11/11

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CXO Lab WeChat official account

