



# Test Report

**Sample Name:** \_\_\_\_\_ The integrated circuit \_\_\_\_\_

**Sample Type:** \_\_\_\_\_ XC7A200T-2FBG676I \_\_\_\_\_

**Manufacturer:** \_\_\_\_\_ XILINX \_\_\_\_\_

**Customer:** \_\_\_\_\_

Chuangxin Online Test Center Laboratory

February 28, 2024

# Test Report

Customer

Customer Address: N/A

Sample Name: The integrated circuit

Sample Type: XC7A200T-2FBG676I

Manufacturer: XILINX

Date Code: 22+ / 2329

Package Type: BGA-676

Sample Amount: 1600 PCS

Check Amount: 30 PCS

Arrived Date: 02/28/2024

Testing Date: 02/28/2024/11: 00 - 02/28/2024/12: 30



Tested by \_\_\_\_\_

Inspected by \_\_\_\_\_

Approved by \_\_\_\_\_

# Test Item

External visual inspection

Pin correlation test

Programming test

Solderability analysis

Radiography(X-ray)

XRF test

Key functional test(KFT)

Baking

Tape and reel

Top permanency test

Internal visual inspection

SAT test

Cross section

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# Methods & Equipment

## 1.1 Test standard:

- **AS6081A-2023**

## 1.2 Optical microscope:

- Equipment spec:

Optical microscope: SEZ-260 X7-X45(Due date: 7/18/2024)

## 1.3 Digital caliper:

- Equipment spec:

Digital caliper: (0~150) mm(Due date: 7/18/2024)

## 1.4 Product datasheet:

- 《XILINX XC7A200T-2FBG676I》:

<https://4donline.ihs.com/images/VipMasterIC/IC/XILI/XILI-S-A0011785145/XILI-S-A0014512052-1.pdf?hkey=6D3A4C79FDBF58556ACFDE234799DDF0>

# Analysis Summary

## External visual inspection:

Applicable standard: **AS6081A-2023**

External visual inspection on 30 PCS samples(10 PCS of D/C 22+ and 20 PCS of D/C 2329). No secondary coating, sanding marks, crack or chips were observed on all inspected. BGA spheres were in acceptable condition. Devices package and dimension matched to manufacturer's specification.

All devices passed the external visual inspection.

### (1) Specification dimension:

- D: 27.00 BSC mm
- E: 27.00 BSC mm
- A: 2.14-2.54 mm

### (2) Measurement dimension(D/C 22+):

- D: 26.98 mm
- E: 26.98 mm
- A: 2.32 mm

**(3) Measurement dimension(D/C 2329):**

- D: 26.99 mm
- E: 26.99 mm
- A: 2.32 mm

<b>External visual criteria</b>	<b>Yes/No</b>	<b>Result</b>
<b>Mix-up</b>	No	Pass
<b>Top scratches</b>	No	Pass
<b>Bottom scratches</b>	No	Pass
<b>Chips</b>	No	Pass
<b>Residues</b>	No	Pass
<b>Indentation</b>	No	Pass
<b>Contamination</b>	No	Pass
<b>Cracks</b>	No	Pass
<b>Copper defect</b>	No	Pass
<b>Oxidization</b>	No	Pass
<b>Coplanarity</b>	Yes	Pass
<b>Sanding marks</b>	No	Pass
<b>Secondary coating</b>	No	Pass
<b>Top permanency test</b>	N/A	N/A



# 1. Device description:

Artix-7 FPGA DC and AC characteristics are specified in commercial, extended, industrial, expanded (-1Q), and military (-1M) temperature ranges.

# 2. Package dimension:

## FB676, FBG676, and FBV676 (Artix-7 FPGAs) Flip-Chip Lidless BGA (1.0 mm Pitch)

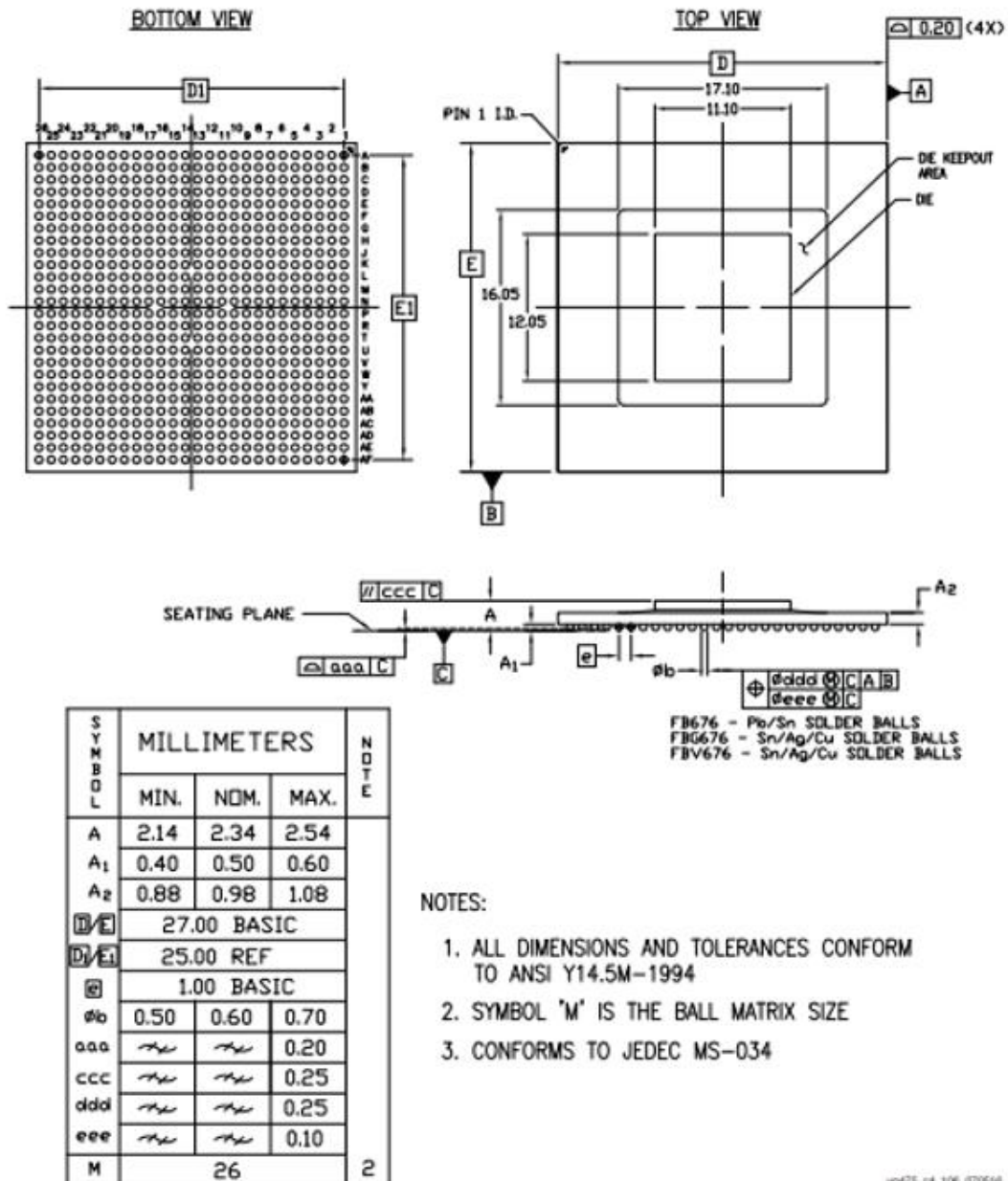


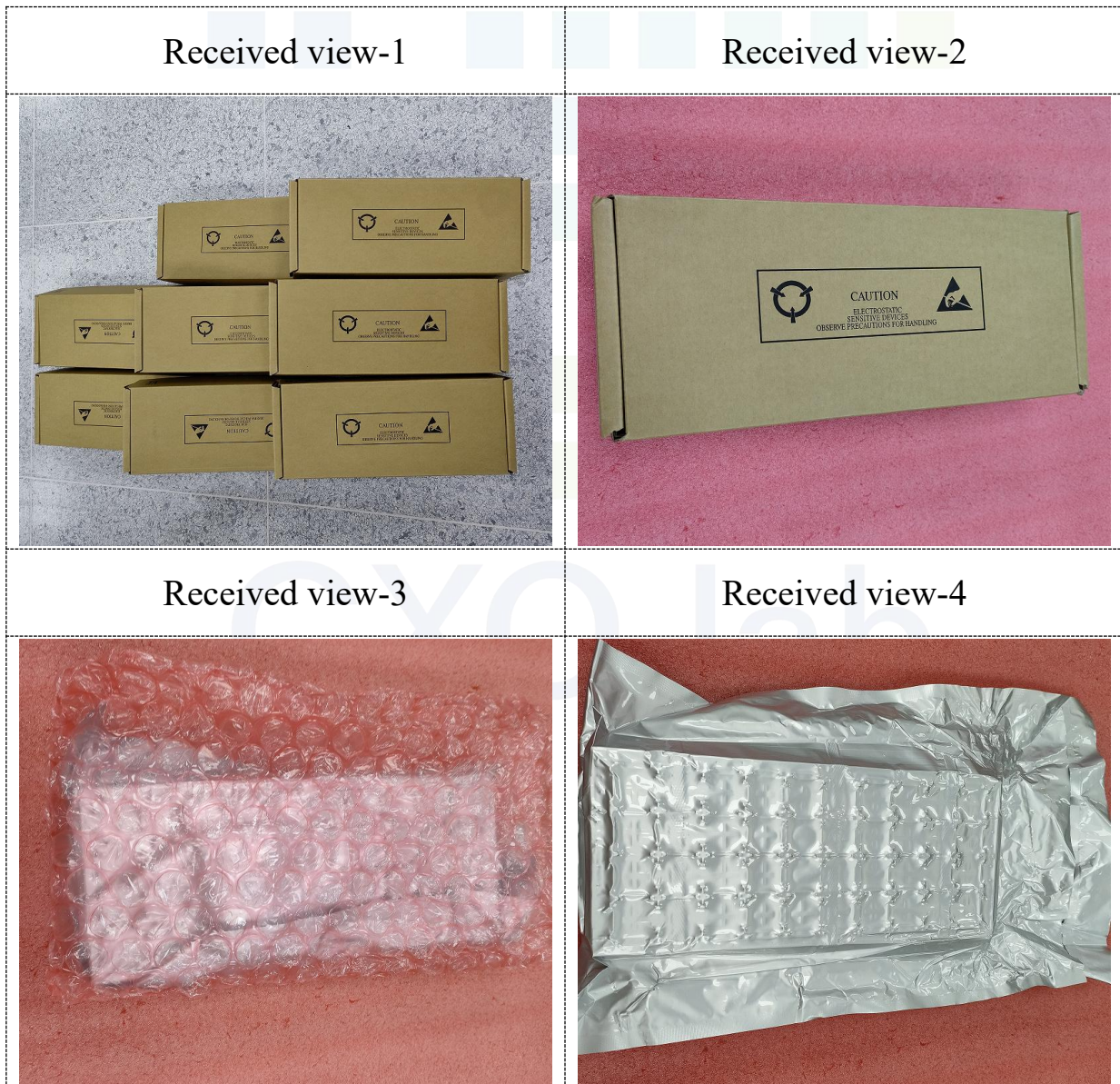
Figure 4-14: FB676, FBG676, and FBV676 Flip-Chip Lidless BGA Package Specifications for Artix-7 FPGAs



### 3. Receiving inspection:

<b>Gross Weight</b>	13.0 Kg	<b>Parts Total</b>	1600 PCS
<b>Number of Boxes</b>	8	<b>Full Label</b>	Exist
<b>Package Type</b>	Tray	<b>Moisture Protection</b>	Exist
<b>MSL</b>	4	<b>ESD Protection</b>	Exist

Note: All devices contain 1600 PCS samples.





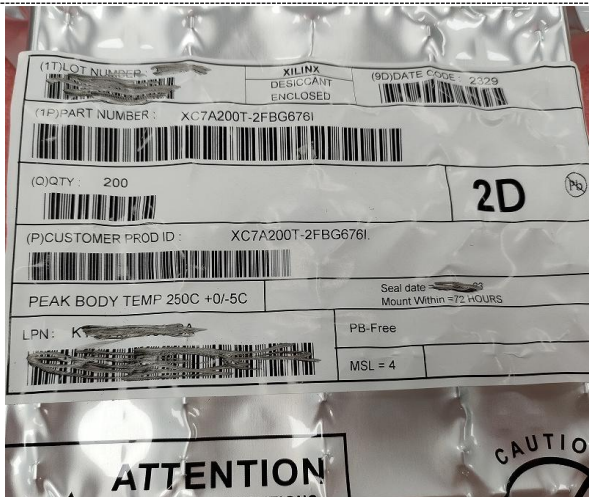
Received view-5



Received view-6



Received view-7



Received view-8



Received view-9



Received view-10



## 4. External visual inspection:

Applicable standard: **AS6081A-2023**

Ambient temperature: 23.3 °C Relative humidity: 55.5 % RH

External visual inspection on 30 PCS samples(10 PCS of D/C 22+ and 20 PCS of D/C 2329). No secondary coating, sanding marks, crack or chips were observed on all inspected. BGA spheres were in acceptable condition. Devices package and dimension matched to manufacturer's specification.

All devices passed the external visual inspection.

### (1) Specification dimension:

- D: 27.00 BSC mm
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### (2) Measurement dimension(D/C 22+):

- D: 26.98 mm
- E: 26.98 mm
- A: 2.32 mm

### (3) Measurement dimension(D/C 2329):

- D: 26.99 mm
- E: 26.99 mm
- A: 2.32 mm



### Package dimension

#### FB676, FBG676, and FBV676 (Artix-7 FPGAs) Flip-Chip Lidless BGA (1.0 mm Pitch)

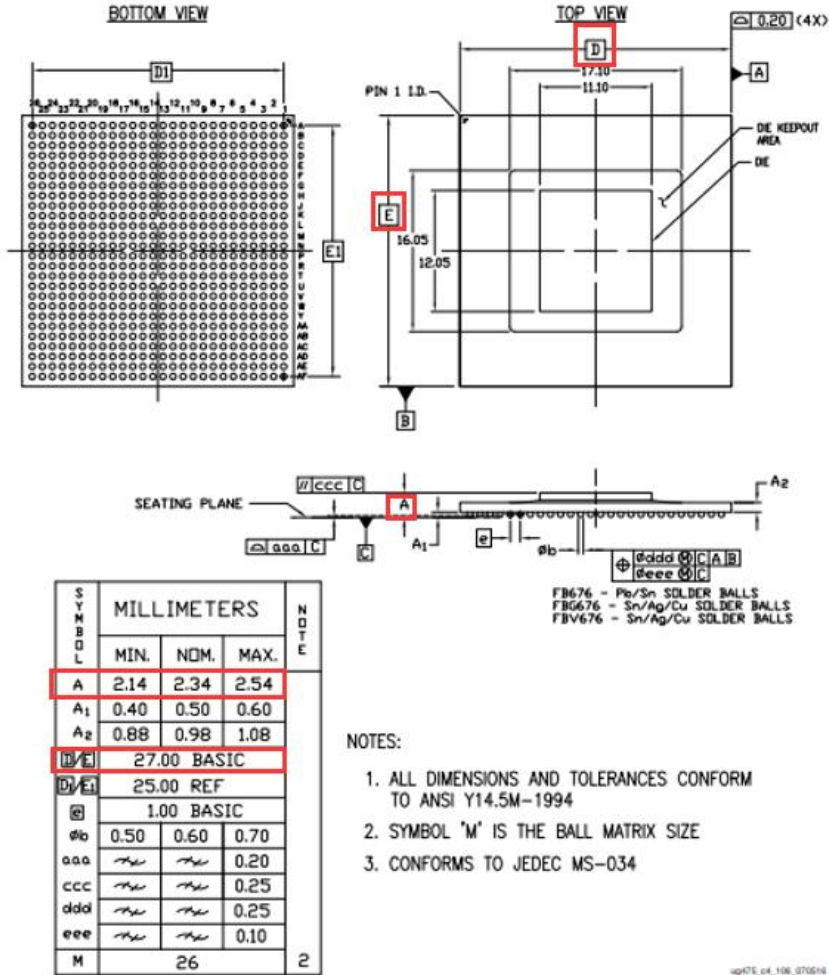


Figure 4-14: FB676, FBG676, and FBV676 Flip-Chip Lidless BGA Package Specifications for Artix-7 FPGAs

$D/C\ 22 + D = 26.98\ \text{mm}$

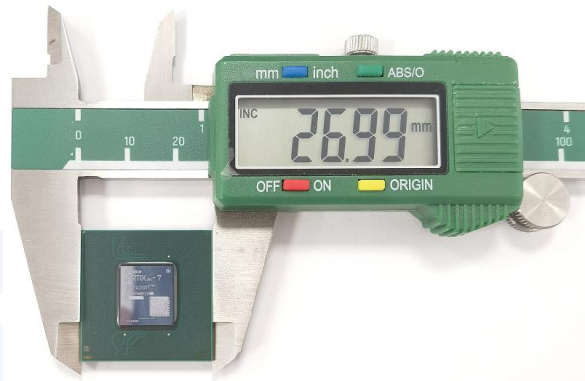
$D/C\ 22 + E = 26.98\ \text{mm}$



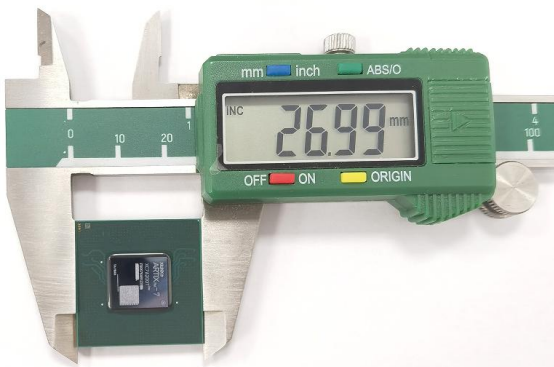
D/C 22+ A = 2.32 mm



D/C 2329 D= 26.99 mm



D/C 2329 E = 26.99 mm



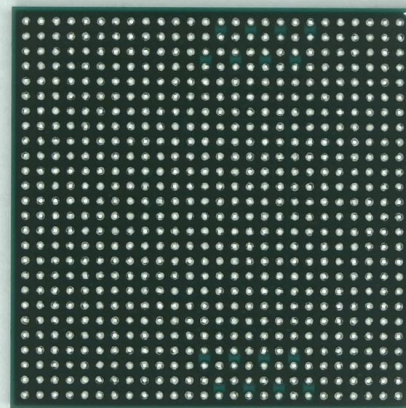
D/C 2329 A = 2.32 mm



D/C 22+ Top



D/C 22+ Bottom

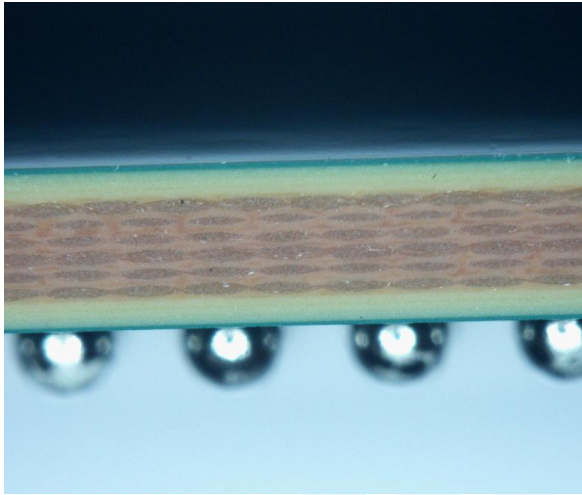


D/C 22+ Side



D/C 22+ Marking

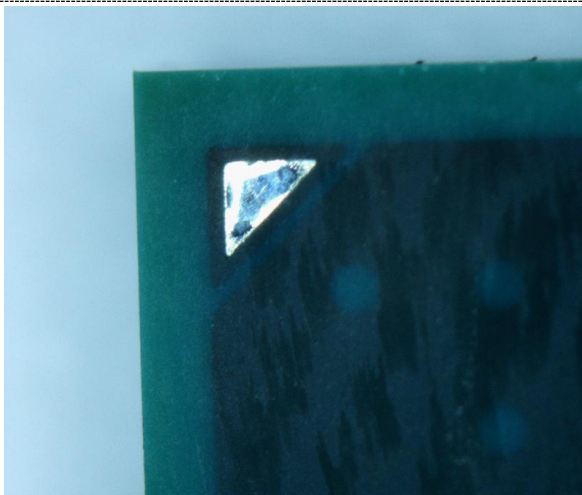




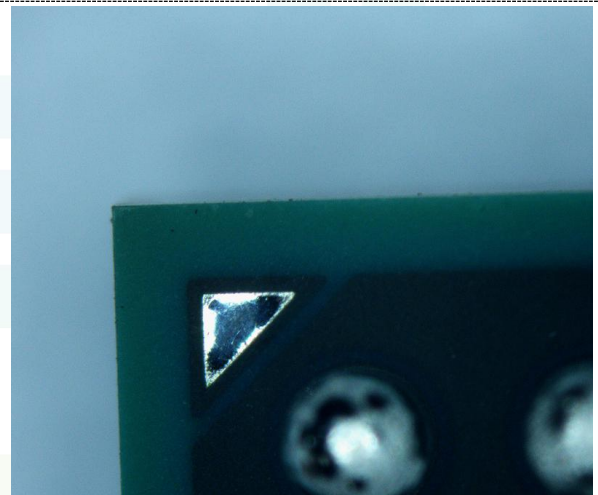
D/C 22+ Top pin



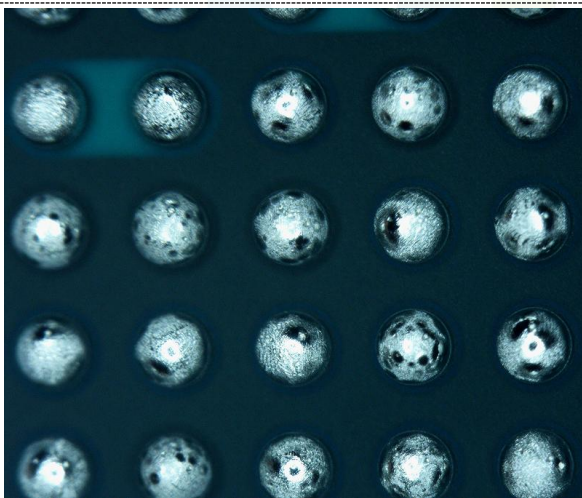
D/C 22+ Bottom pin



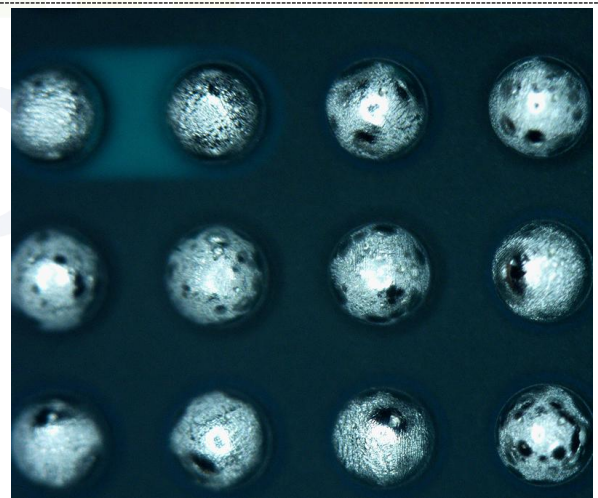
D/C 22+ BGA spheres-1



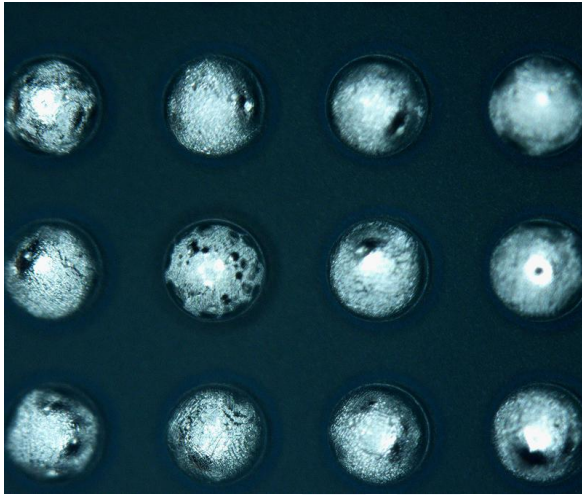
D/C 22+ BGA spheres-2



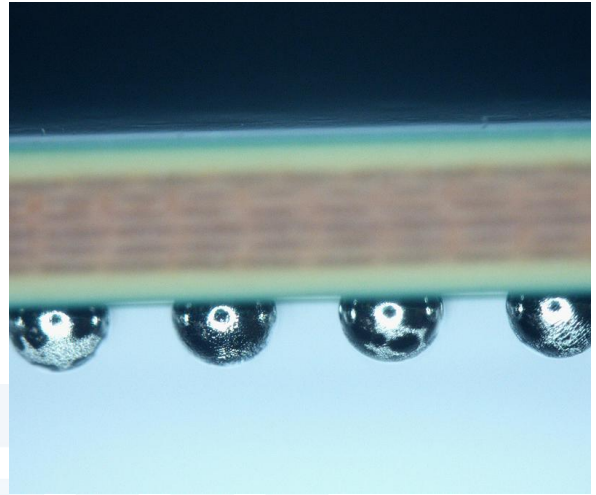
D/C 22+ BGA spheres-3



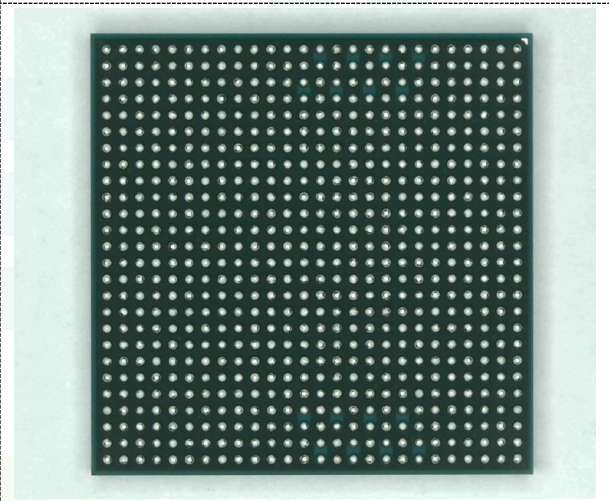
D/C 22+ BGA spheres side



D/C 2329 Top



D/C 2329 Bottom



-End of Report-

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