

BGA Reballing

Friday, September 09, 2016

# BGA REBALLING

Many modern ICs are often only available in RoHS/Lead Free BGA packages

However, leaded solder joints are required to ensure reliability for many demanding applications

ISI offers solutions to meet customer's configuration requirements

### BGA Reballing

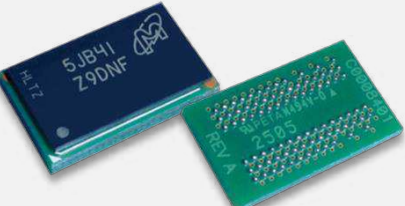


RoHS Lead-Free → Eutectic Tin/Lead

The diagram shows two BGA packages. The left package is labeled 'RoHS Lead-Free' and the right package is labeled 'Eutectic Tin/Lead'. A red arrow points from the left package to the right package, indicating the reballing process.

Covered in this presentation

### BGA Interposers



Separate Pb & Pb-free solder joints

The diagram shows two BGA interposers. The left interposer is blue and labeled '5JB41 Z9DNF'. The right interposer is green and labeled '259S'. Below the interposers, the text reads 'Separate Pb & Pb-free solder joints'.

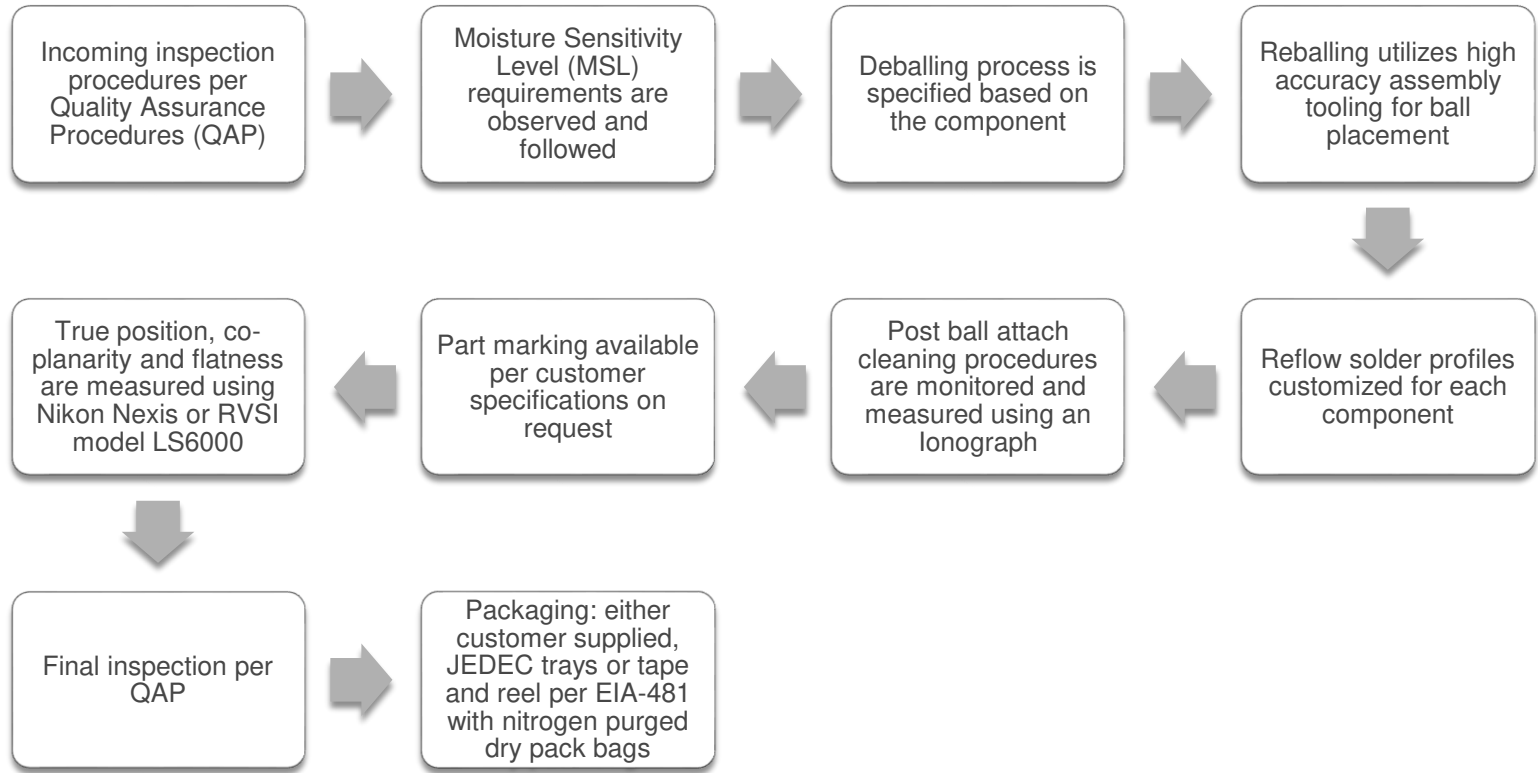
Contact ISI for additional information

# ISI SOLUTION: REBALLING

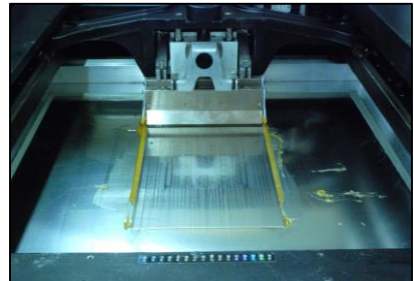
- ISI has an advanced, qualified process for removing and reballing solder spheres that is compatible to the assembly process criteria for any BGA package:
  - Tin-lead (Sn63Pb37 eutectic), Lead-free, and specialty alloys
  - Any ball size and ball pitch including Chip Scale packages
- Processes are tailored to each part. Specific control parameters are clearly defined for:
  - Detailed production process traveler
  - Controls for temperature
  - MSL / Humidity
  - ESD protection
  - Ball size/position tolerance specifications
  - Automated inspection
  - Cleanliness
  - Repackaging



# REBALLING PROCESS OVERVIEW



# REBALLING FACTORY TOUR



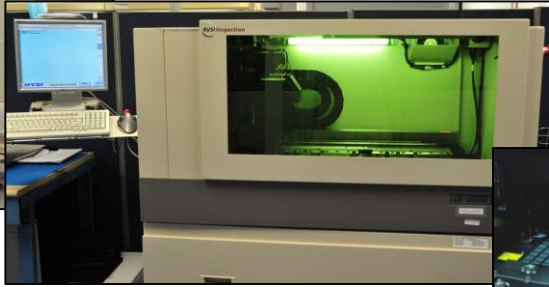
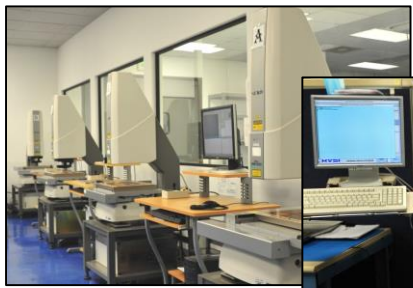
Flux Printing / Ball Attach



Conduction / Convection Oven



Ionograph Cleanliness Testing



Automated Optical Inspection



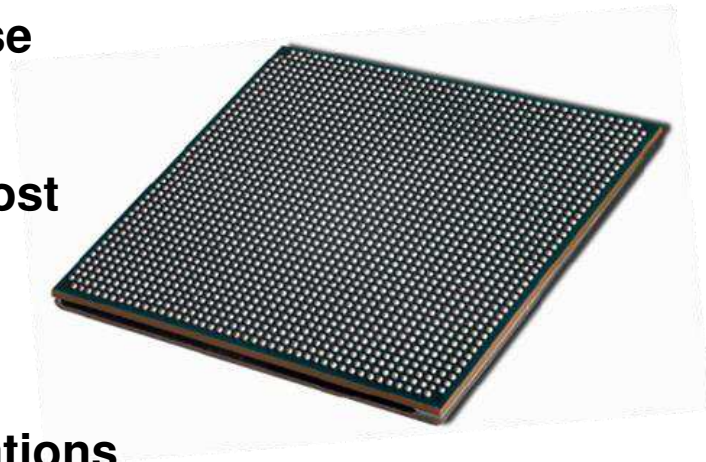
# REBALLING CERTIFICATION

## ISI's *Reballed Device Certification*



# WHY CHOOSE ISI FOR REBALLING?

- ISI has been **audited and qualified** as a **production reballing supplier** to the leading Tier 1 defense contractors
- We certify that our reballed parts meet the most stringent industry criteria
- We reball over 100,000+ BGAs each year
- We are cost-effective for high volume applications
- Any pitch, any package, any alloy
- Quick-Turn Delivery: 3-5 day expedited turn time available



# THANK YOU!

Contact ISI to engage on your next project:

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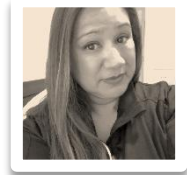
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