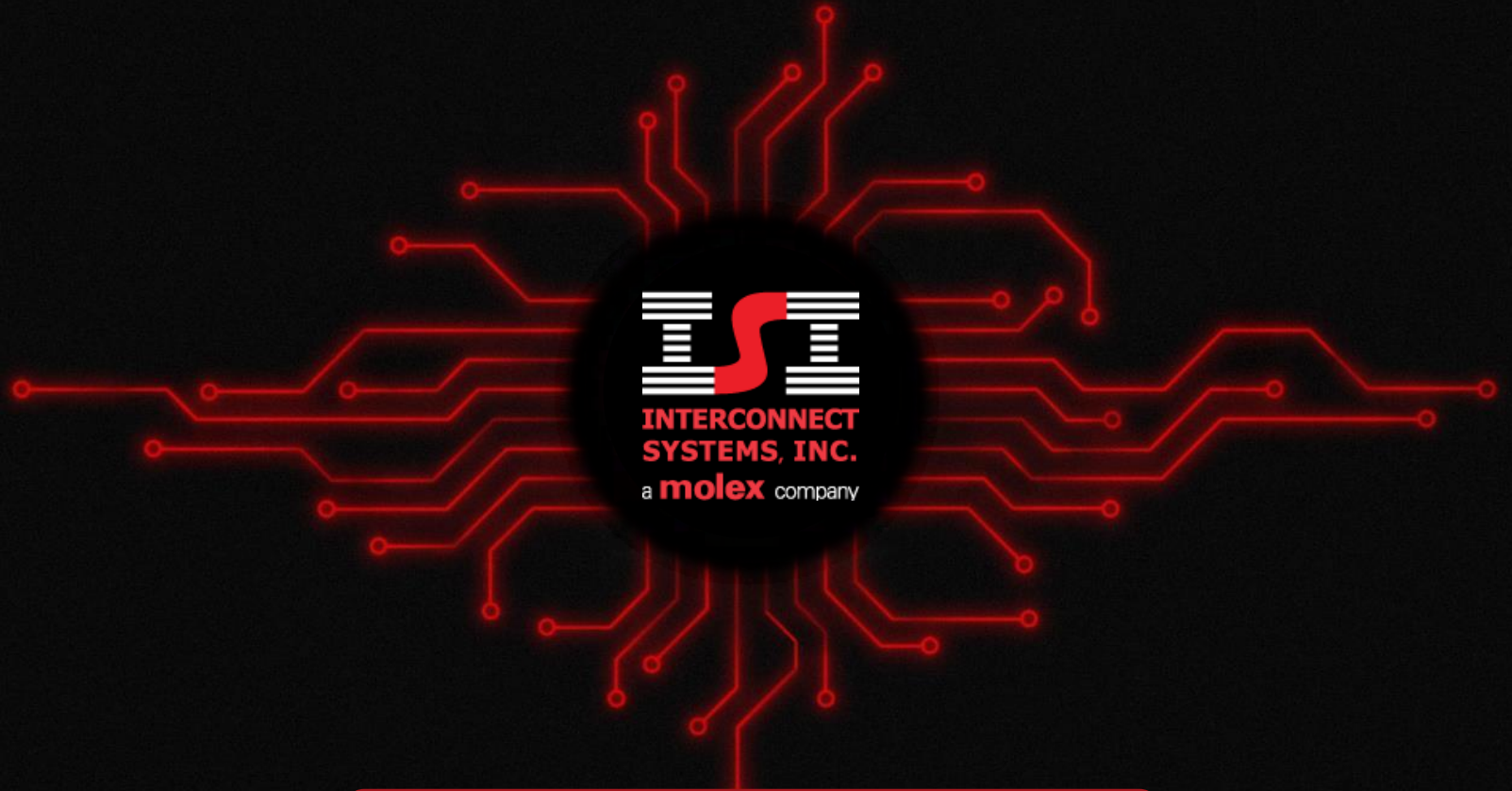




BGA Reballing

BGA Reballing

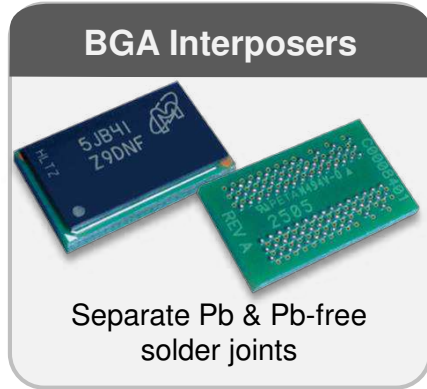
Many modern ICs are often only available in RoHS/Lead Free BGA packages

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

ISI offers solutions to meet customer's configuration requirements



Covered
in this
presentation



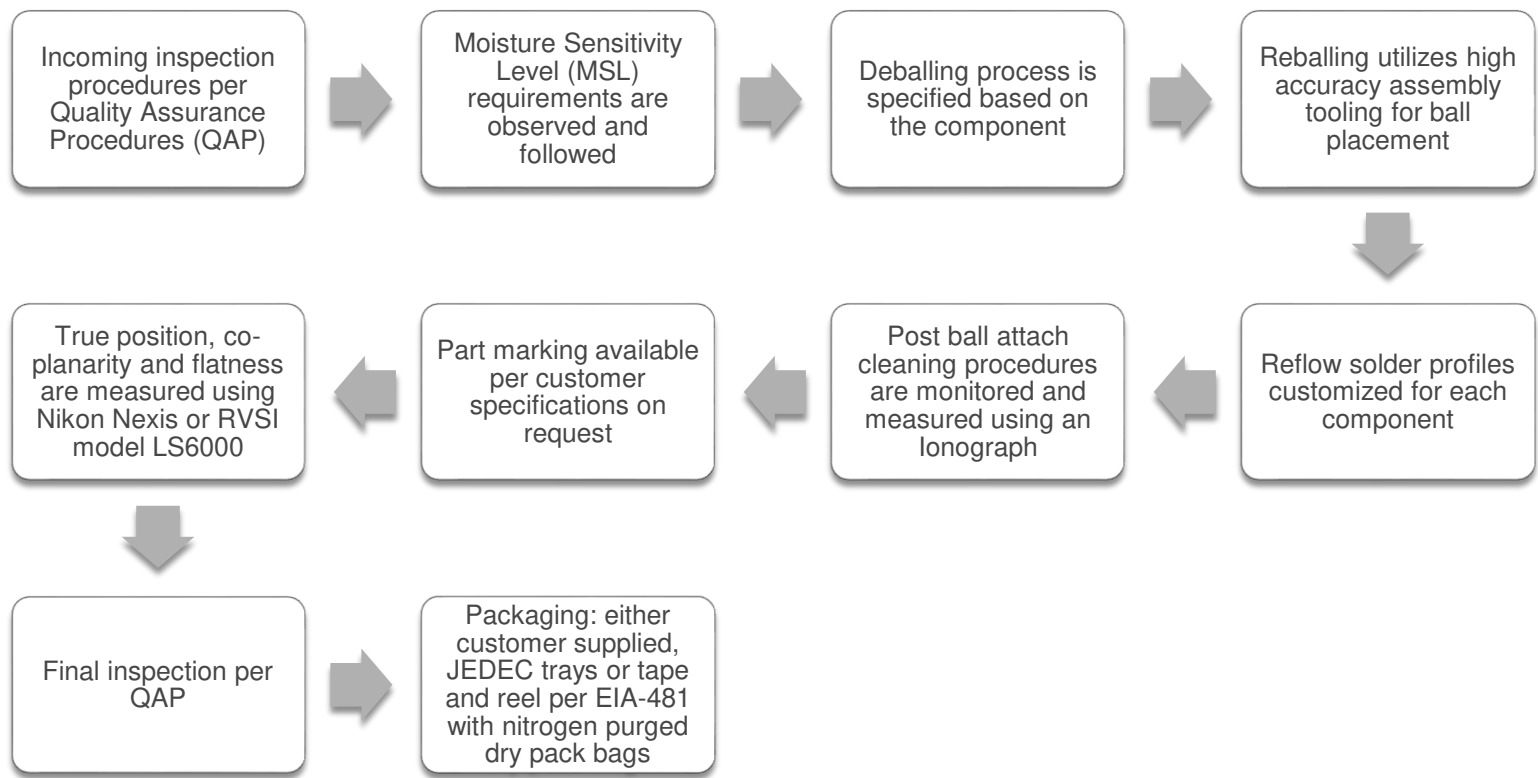
Contact ISI for
additional
information

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



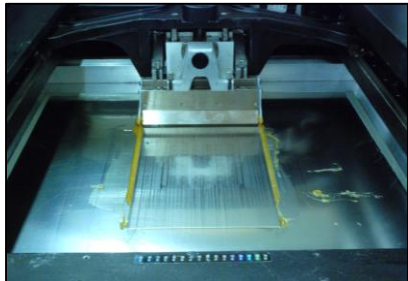
REBALLING PROCESS OVERVIEW



REBALLING FACTORY TOUR



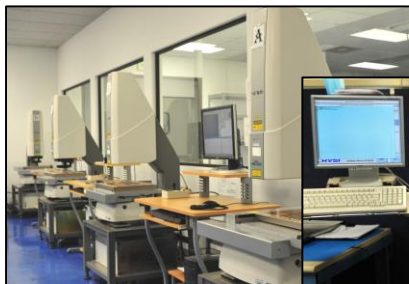
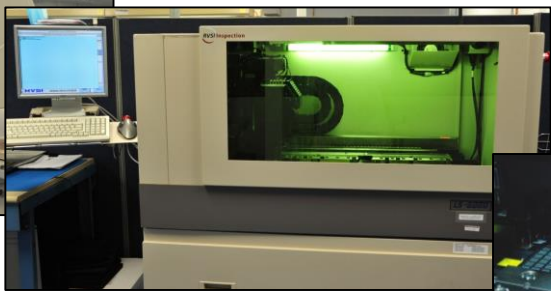
Flux Printing / Ball Attach



Conduction / Convection Oven



Ionograph Cleanliness Testing



Automated Optical Inspection



REBALLING CERTIFICATION

ISI's *Reballed Device Certification*

INTERCONNECT SYSTEMS, INC.

Certified Reballed Parts

Part No. _____ Order/Release No. _____

- ✓ We certify these parts have been protected through the process to maintain the IPC/JEDEC J-STD MSL Classification as required by the semiconductor supplier.
- ✓ We certify that the process used for ball removal did not subject the silicon to a time/temperature cycle above 50% of the supplier's recommended cycle.
- ✓ We certify that the ball-attach process was performed in a nitrogen environment in a conduction/convection oven and has not exceeded 90% of the time/temperature recommended by the supplier.
- ✓ We certify that these parts were 100% inspected and have met the original supplier's specifications for flatness and co-planarity.


INTERCONNECT
SYSTEMS, INC.



Bill Miller, President and CEO

(805) 482-2870
www.isipkg.com

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

