



Microcross is the industry-recognized leader in innovative component modification technologies, with our BGA reballing process that flushes all lead-free balls and alloy residue from pads and replaces with tin-lead balls.



Industry Leading

Turn-Around Times and Guaranteed Yields

Conversion to Leaded Spheres

for Hi-Rel Applications

RoHS Compliance

Conversion

Proprietary Robotic Hot Solder Dip Equipment

Removes Solder Balls from BGA Substrate

RoHS BGA's to Sn/Pb or Sn/Pb to SAC 305

BGA Reballing Conversion

LGA, QFN, and DFN Packages

Ball Attach

LGA Gold Removal

and Ball Attach

EXTENSIVE QUALIFICATION AND TESTING

- AS9100 / ISO9001 Quality System
- ITAR Registered
- Full ESD Environment (JED625 Compliant)
- Certified for Class 0 ESD Processing to ANSI/ESD S20.20
- NADCAP AC7120 Certified
- Fully Compliant to GEIA-STD-006 and IEC TS62647-4
- Temperature and Humidity Controls
- Fully Traceable Documentation



BGA Reballing Center of Excellence

ROBOTIC HOT SOLDER DIP BALL REMOVAL

- Proprietary robotic equipment ensures repeatability, consistent immersion depth, regulated temperature exposure, even solder thickness, co-planarity and process cleanliness.
- Five-step process integrates flux, preheat, solder ball removal, water rinse and dry.
- Robotic equipment employs dynamic solder wave technology and contamination-free solder baths.
- Established Robotic Hot Solder Dip Center of Excellence in Manchester, NH (63,000 sq. ft.) and BGA Reballing Center of Excellence in Round Rock, TX. Pioneered Robotic Hot Solder Dip Technology (RHSD) in 1984.
- RHSD for tin whisker risk elimination, gold removal, restoration of solderability.



FLUX APPLICATION, SOLDER BALL PLACEMENT AND REFLOW

- Custom stencils are created for each package to ensure consistent flux volume and accurate ball placement.
- Proprietary BGA sphere attachment process can be customized quickly, ensuring proper package and sphere tolerances are met for each BGA and creating the highest possible yield for each reballing job.
- Reflow profiles are custom developed for each package based on manufacturer's data sheets.
- Reflow is done using a precise, automated reflow system in a N2 environment.

POST PROCESS INSPECTION AND QUALIFICATION TESTING

- Industry-leader offering the most precise and repeatable process available. Reballs BGAs using process parameters in accordance with the IEC TS 62647-4 Standard.
- Optical microscope and comparator examination confirm ball condition: physical outline, size, sphere integrity, luster and uniformity evaluated.
- Additional testing available include: Acoustic Microscopy, XRF for alloy confirmation, DPA: cross-sectioning and ball shear testing, ionic cleanliness and automated scan for sphere size and location.

ADDITIONAL PROCESS FEATURES

- Components baked and packaged according to moisture sensitivity level (MSL) per J-STD-033.
- Package sizes as small as 1.2 mm, pitch from 0.5 mm and experience with plastic & ceramic components, including flip chip & multi-chip modules.

About Micross

Micross is the most complete provider of advanced microelectronic services and component, die and wafer solutions. With the broadest authorized access to die & wafer suppliers, an extensive portfolio of hi-rel power, RF, optoelectronics, memory, data bus, logic, and SMD/5962 qualified products, and the most comprehensive advanced packaging, assembly, modification, upscreening, and test capabilities, Micross is uniquely positioned to provide unparalleled high-reliability solutions, from bare die, to fully packaged devices including hermetic ICs/MCMs, PEMS, ASICs, FPGAs, and PCBs, to complete program life-cycle sustainment. For more than 45 years, Micross has been a trusted source for the aerospace, defense, space, medical, energy, communications, and industrial markets.



Need Information?

- Quote Request: micross.com/quotes
- General Requests: micross.com/info
- Technical Support: micross.com/tech-support