

Component Modification Services

Microcross Components delivers the industry's most comprehensive range of Hi-Reliability and Mission-Critical microelectronic components and Component Modification Services available from a single source.

With 40+ years of experience, Microcross has built its business focused on the hi-reliability requirements of the aerospace & defense and space sectors. We partner with the major contractors in the defense industrial base to provide current and continued support for mission-critical systems and platforms. Microcross services can be tailored to fit a customer's unique requirements.

Facility Overview

Microcross Crewe is located in the County of Cheshire in the North West of England.



Microcross Crewe UK facility provides unparalleled in-house engineering and technical depth of knowledge for component modification.

The company's extensive mix of equipment supports customised engine process solutions whilst also addressing International Standards used in the best practice for re-balling BGA and Hot Solder dipping components.

Industry-leading provider of Component Modification Solutions
driven by the implementation of International Standard,
proprietary processes and innovative engineering

ROBOTIC HOT SOLDER DIP

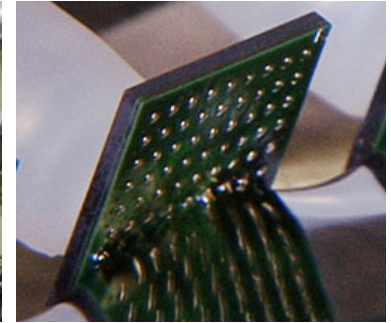
- Micross is one of the established providers that offer Robotic Hot Solder Dip
- Unparalleled robotic capacity supporting industry-leading quality and lead-times
- Robotic Hot Solder Dip for Tin Whisker Risk Elimination, Gold Removal & Restoration of Solderability
- RoHS Compliance – removes SnPb & replaces it with SAC305 or specified alloy
- Post-Process Testing: Solderability, XRF Solder Characterization, Ionic Cleanliness
- Proprietary ultra-flat finish for bottom termination packages (QFN, MLF, LCC)

BGA REBALLING / BALL ATTACH

- Micross developed a differentiated process solution for de-balling and pad preparation which precisely controls the thermal profile of the part.
- Supports proprietary robotic processes to deliver guaranteed BGA reballing yields
- BGA reballing converting RoHS BGAs to SnPb or Sn/Pb to SAC305
- Ball attach to LGA, QFN and DFN packages
- BGA re-work & repair
- LGA Gold Removal & Reballing
- Ball pitch from 0.40mm min/Ball diameter from 0.152mm
- Component size from .858mmx.858mm, pitch 0.4mm and expertise with plastic and ceramic components (Flip Chip & MCM)
- CTE Mismatch Mitigation Options include: HMPS spheres, BTCE Micross patent, Non-collapsible spheres



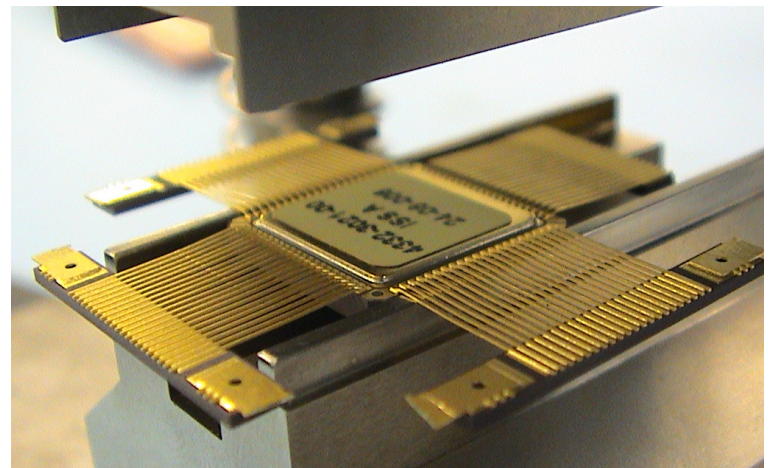
Robotic Hot Solder Dip



BGA Reballing

LEAD TRIM & FORM and RECONDITIONING

- Forms and trims straight leads for surface mount placement per customer's drawing or spec (an RHSD process typically follows to coat leads & prevent oxidation)
- Reconditioning of Bent or Damaged Leads: Robotic process realigns bent leads & scans to verify results
- Trim & Form for J-Leaded, SOIC, SOJ, DIP, PSOP, TSOP, FP, QFP & other package outlines; Compliant to J-STD-001



Trim and Form

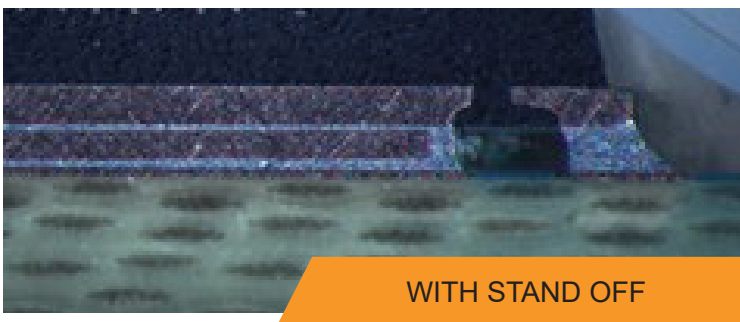
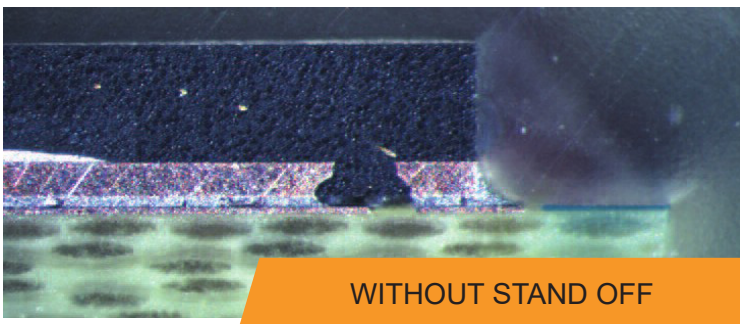
Bottom Terminated Component Enhancement (BTCE)

Greater Compliance For:

- CTE mismatch
- Acceleration and vibration
- Extreme temperature cycling

Increased mitigation for exposure to acceleration and vibration in application.

BTCE improves solder joint robustness through increasing solder volume in the peripheral filets

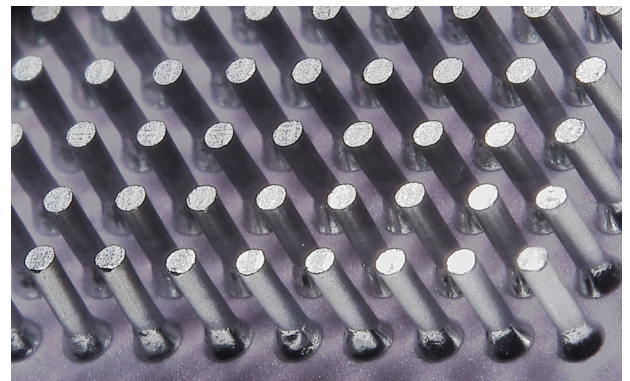


LEAD ATTACH

- Reduce solder joint stress through attachment of J-shape and L-shape leads to LCC's using thermo-compression bond or proprietary hi-temp solder process
- Lead Replacement: Restoration & Repair of bent/damaged leads
- Lead Material: CDA 102 Copper, ASTM B-170 Grade 2
- Attachment verified by Lead Integrity & Bond Pull Testing

CGA ATTACH

- Offers a unique solution to LGA / BGA conversion to CGA 2,500+ Column Placement Capable and a highly desirable solution to the space community
- Column composition Sn10Pb90 or Sn20Pb80
- 1mm/1.27mm pitch tooling available



CGA

ELECTROLESS NICKEL / IMMERSION GOLD PLATING OVER A COPPER SUBSTRATE

Micross Crewe is one of the only facilities in the world that offers E.N.I.G. plating in an ESD environment.

- Fully ISO 14001 compliant whilst giving a 98% yield rate
- This process was 10 years in development and serves the aerospace community

TEST & INSPECTION

- Fine & Gross Leak Testing
- Acoustic Microscopy
- X-ray Inspection
- X-ray Fluorescence Analysys
- SEM
- 3D/2D Scanning
- Solderability Testing
- Ionic Cleanliness Analysis

PCB SOLUTIONS

- Assembly
- Rework
- Repair
- Component Harvesting

SUPPORT SOLUTIONS

- Tape and Reel
- 3D Scan

QUALITY CERTIFICATIONS

- AS9100D BS EN ISO 9001:2015
- ISO14001
- JOSCAR Registered
- HM Government - Cyber Essentials



Electroless Gold Plating