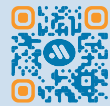
micross
one source. one solution.

Robotic Hot Solder Dip (RHSD)

Service Overview

Micross is the industry-recognized leader in innovative component modification technologies, pioneering our Robotic Hot Solder Dip Technology, no in the industry comes close to the precise controls of the RHSD equipment.



Solder Temperature Held to Within 1°C
Exceeds 3°C Tolerance Allowed by GEIA-STD-0006

Preheat and Clean Baths Held to +3°C
Exceeds Requirements of GEIA-STD-0006

Motion Controlled to Within 0.001”
Exceeds 0.004” Requirement of GEIA-STD-0006

Dwells Held to Within 0.1 Second
As Required by GEIA-STD-0006

S20.20 ESD Certification
Exceeds Industry Requirements

US Navy Qualified Tin Whisker Removal
Removes 100% of the Pure Tin and Replaces with SnPb

RoHS Compliance
Removes Lead-Bearing Alloy and Replaces with SAC305

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 Certfied
- Fully Compliant to GEIA-STD-006 and IEC TS62647-4
- Temperature and Humidity Controls
- Fully Traceable Documentation
- Integrated Production Control System

Robotic Hot Solder Dip

ROBOTIC HOT SOLDER DIP

Tin Whisker Elimination

- Per Automated Process Removes 100% of the Pure Tin and Replaces it with SnPb (Tin-Lead).

Gold Embrittlement Elimination

- Removes Gold and Replaces it with SnPb. Typically Required to Replace the Gold Beyond the Effective Seating Plane.

RoHS Compliance

- Removes the SnPb and Replaces it with SAC305 (Tin Silver Copper) or Any Other Specified Alloy.

LEAD PREPARATION

Trim and Form

- Surface Mount Placement Per the Customer's Drawing or Proposed by Micross. RHSD Process Coats Leads and Prevents Oxidization.

Reconditioning of Bent Leads

- Robotic Process Realigns Bent Leads and Scans to Verify Results.

Lead-Attach to Leadless Chip Carriers

- Reduce Solder Joint Stress Through the Attachment of J-Shape and L-Shape Leads to LCC's Using Thermocompression Bonding.

COMPONENT INSPECTION

X-Ray Fluorescence Analysis (XRF)

- Used to Determine Lead (Pb) Content of Termination Finishes and Plating Thickness. XRF Testing of Solder Composition and Thickness per MIL-PRF-38535.

Fine and Gross Leak Testing

- Referred to as Seal Test, these Tests Verify the Hermetic Seal of a Component. Typically Follows Trim & Form and/or RHSD of a Glass-Sealed Device.

X-Ray Inspection

- 2D X-Ray Analysis System, Inspects Obscured Joints Beneath BGAs, QFNs and Other Components.

Cleanliness Testing

- Determine Ionic Contamination On the Part that Can Cause Current Leakage Between Leads.

Solderability Testing

- Verify that Termination Finishes Will Readily Accept Solder During Assembly Using J-STD-002 Test or Other Military Specification.

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.

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