CASE STUDY

AIM's NC259FPA SAC305 Type 7 Ultrafine No Clean Solder Paste Supports Flip Chip Application

PROBLEM

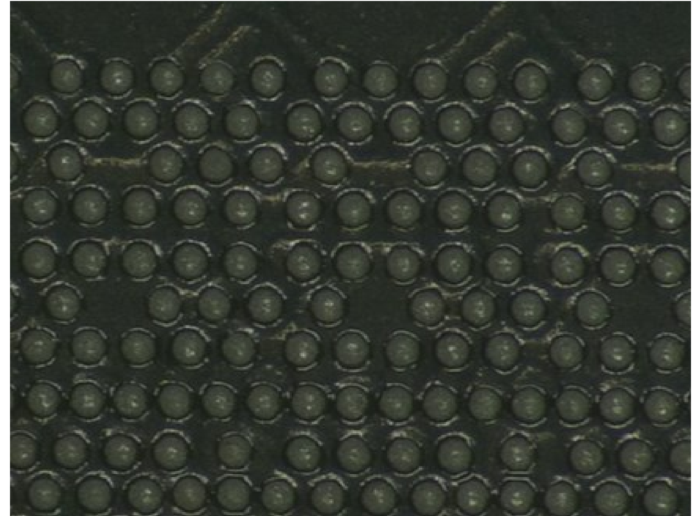
An electronics manufacturer was evaluating solder paste for a new flip chip application requiring precise deposition through an ultra-thin 20 µm stencil with 76 µm round apertures. The process required excellent print consistency, smooth deposit formation, and tight voiding control. The customer's internal requirement was more stringent than standard IPC voiding acceptance criteria, with boards subject to rejection if any void exceeded 25%.

SOLUTION

AIM supplied NC259FPA SAC305, T7 paste for evaluation on the customer's SMT line. The paste was tested using an electroformed stencil with factory-applied nanocoating, and a reflow process in nitrogen. The paste demonstrated excellent print performance. No solder spikes, bridging, or insufficient solder deposits were observed. The solder deposits showed strong volume consistency.

RESULTS

The evaluation produced satisfactory results. Only one relatively large void was observed, and it remained below the IPC specification. AIM and the customer identified the opportunity for additional optimization and planned further review and testing.



PRODUCTS/SERVICES USED

- NC259FPA Ultrafine No Clean Solder Paste
- SAC305 Solder Alloy
- AIM Solder Technical Support

SUCCESS METRICS

- Excellent print performance with consistent volume deposit
- Successful printing through a 20 µm stencil with 76 µm round apertures.
- X-ray results met IPC voiding acceptance criteria

LEARN MORE

Learn more about ultrafine solder paste from AIM experts:

- Solder Paste Powder: When to Downsize
- Understanding Solder Paste Powder Sizes