Solder plus Support

CASE STUDY

AIM's W20 SAC305 Eliminates Graping and Improves Reflow Performance on Challenging Assembly

PROBLEM

While preparing for a difficult, high-mass assembly, an EMS wanted to compare AIM's W20 against its current solder paste. The key issue was graping on 0201 capacitors, described as non-wetting, non-coalescence, dull, and grainy solder joints. The customer had been reworking and touching up nearly every board with the incumbent paste due to these issues.

SOLUTION

The customer tested W20 as a drop-in replacement using the same printer parameters as the incumbent material. During reflow evaluation, AIM technical support helped optimize the profile to be faster, shorter, and cooler than the previous setup. This process adjustment, combined with the W20 formulation, significantly improved reflow results.

RESULTS

The original graping issue on 0201 components was resolved to the customer's satisfaction. According to the quality inspector, results with the new AIM profile were "tremendously better." The evaluation concluded positively, and the customer moved directly into a purchasing discussion regarding availability and sourcing of W20, including cartridge packaging.

PRODUCTS/SERVICES USED

- W20 Water Soluble Solder Paste
- SAC305 Lead-Free Solder Alloy
- AIM Solder Technical Support

SUCCESS METRICS

- Graping issue on 0201 components resolved
- Drop-in compatibility with existing print parameters
- Improved reflow results
- Eliminated excessive rework

LEARN MORE

Learn more troubleshooting SMT problems and adjusting reflow profiles from AIM experts:

- SMT Troubleshooting Guide
- Reflow Profile Supplement for Lead-Free Alloys