

ABX Engineering, Inc. – EMS Total Quality Solutions

DFM – Design for Manufacturing includes review of the Gerber files and fab drawings to determine best solutions for panelization and addresses options for route and retain, v score, laser de-panel, etc.

DFM also extends into the manufacturing processes, with ongoing reviews during the set-up and manufacturing, which cover; reviews of the kits against the BOMs – Bills of Materials, accuracy of customer BOMs for reference designators, quantities, component values, orientation for polarity conscious components, as well as component package size and pad geometry. Additionally there are stencil reviews, solder paste thickness verification, temperature profiling for every assembly and internal First Article Approvals.

AOI – Automatic Optical Inspection ensures that all SMT components are placed in their correct locations and are of the correct value and orientation.

Dage X-Ray assists us in ensuring that our process for installation of BGAs, LEDs, QFNs, etc are second to none for placement and soldering quality.

DFT – Design for Test looks at overall test coverage of the assembly and is critical for customers moving to higher volumes and moving toward an ICT – In Circuit Test solution.

Functional Test is an important element of our Total Quality Solutions and covers bench testing of all assemblies to the customer test specifications and provides the final aspect of assurance that the assemblies will be fully functional upon delivery. This essential step provides an initial power up of the assemblies and testing of key parts of the assembly which helps to eliminate Infant Component Mortality as a failure mode. Component failures are still the number one defect that is seen in customer assemblies and assemblies that are not tested are at risk of this occurring.

Static Burn-In addresses extended power up of assemblies in our dedicated burn-in chambers which assist in the screening and detection of Infant Component Mortality.

Ruggedized Assemblies addresses conformal coating and encapsulation for customers with more extreme operation environments or their installed equipment. Our dedicated conformal coating room can apply Urethane based materials to assist in the protection of the finished PCBA / assembly.

Customized packaging solutions are offered for customers with higher volume assemblies. This provides an option to deploy re-useable ESD packaging solutions that eliminate the costly processes of hand packing every PCBA in ESD bags and foam and reduces the overall amount of trash resulting from the unpacking processes when received by the customer, so an excellent opportunity to reduce carbon footprints for ABX and our customers.

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