

Data Sheet

Aspen Tech Development Process

Advanced Microelectronic Packaging

Aspen Technologies' Mission is "to enable our customers to rapidly bring new products to market..." The Aspen Technologies Development Process was created to manage this process in a swift but disciplined manner. This process ensures that all customer and product needs are properly considered and business factors are accurately calculated. The phases of this process are:

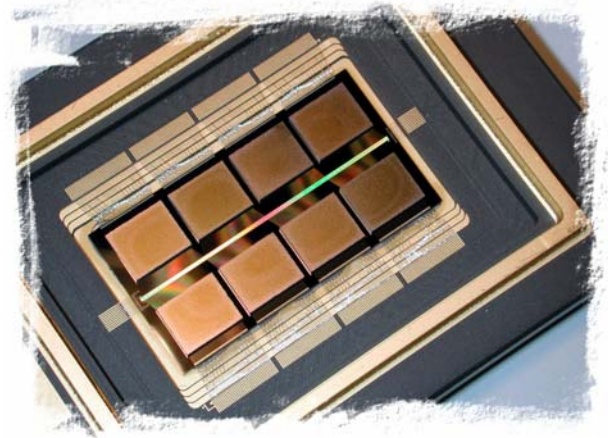
Phase #1: Evaluation. In this phase, working closely with the customer, we evaluate package and assembly technologies, materials, and suppliers as part of the overall product development effort. Risk analysis, reliability and qualification plans, short loop experiments and detailed development and business plans are typical deliverables from this phase.

Phase #2: Design & Prototype. In this phase, product and package designs are completed and initial prototype packages and devices are fabricated. Process development activities commence and statistical control plans, customer-specific work instructions, package and assembly drawings, and preliminary production documentation is created. Tooling, unique equipment, and fixtures are specified and procured as required. Prototype devices are fabricated and tested, and designs are verified through functional and initial reliability testing.

Phase #3: Development, Qualification & Pre-Production. In this phase, larger numbers of devices are assembled and tested and a development feedback loop is used to make design, process and material changes as needed. All assembly-related processes are statistically verified for their ability to meet the production criteria. Initial process capability data is generated during this phase and control and reaction plans are completed. If processes are to be transferred to another facility, this effort is initiated during this phase. Next is process validation, and the product is subjected to the entire reliability test plan. The deliverable from this phase is a qualified package, assembly process, and final product that is ready for volume production.

Phase #4: Production. This is the phase in which manufacturing and business plans are completed and formal production begins, according to the volume ramp plan. Additional capacity is brought on line as needed, and continuous quality improvements, cost reductions and yield enhancements are emphasized during this on-going production phase. Qualified suppliers are managed closely to ensure overall program objectives continue to be met. If a strategic second production source is required, process transfers and training are accomplished in a disciplined and efficient manner during this phase.

One of Aspen Technologies' strengths is making our customers successful through the Aspen Technologies Development Process. **How can we help you be successful?**



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