ECP® - Embedded Component Packaging from AT&S

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Abstract

Embedding has now emerged as a valid competitor to traditional packaging technologies for key applications, offering specific and quantifiable advantages in terms of miniaturisation, integration, reliability and performance. Embedding uses PCB (Printed-Circuit Board) processes for 3D integration of active and passive elements to create SiPs (System in Package).

Just like MEMS (Micro Electro-Mechanical System) and IPD (Integrated Passive Device) emerged from standard semiconductor processes, and then were adapted to match the specific requirements, so does embedding build on well-proven techniques to create this new class of packages.

Inherent advantages include:
- Significant form factor reduction through integration
- Compatibility with traditional SMT processes, in particular with regards to pitch,
- Production batch size
- Historical reliability and process data
- Thermal management
- Possibility to integrate EMI shielding
- CTE matching

AT&S is the leading embedding provider, building on its high technology, high quality HDI heritage to enter the packaging industry. This presentation provides an introduction to some of the inherent advantages, latest capabilities, and successful volume applications of AT&S’ ECP® technology.