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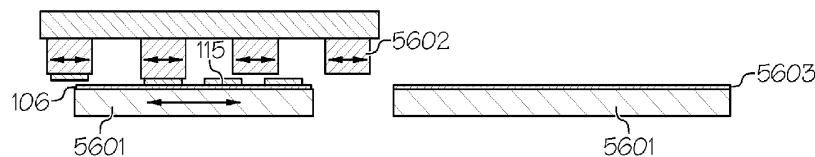
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(54) Title: TOOL AND PROCESSES FOR PICK-AND-PLACE ASSEMBLY



(57) Abstract: A system for assembling a group of dies from a source substrate onto a transfer substrate. A high-throughput low-precision system is configured to pick the group of dies from the source substrate and placed onto an intermediate substrate, where the placement of the group of dies onto the intermediate substrate is performed such that the X and/or Y pitch of the placed group of dies matches a corresponding system-in-package (SiP) pitch. Furthermore, a parallel high-precision system is configured to pick and place the group of dies from the intermediate substrate onto the transfer substrate, where the placement of the group of dies onto the transfer substrate is performed at the SiP pitch, where a precision of assembly onto the transfer substrate is sub-500 nm.

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