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Wang et al.

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(54) **SYSTEM FOR OPTIMIZING NUMBER OF DIES PRODUCED ON A WAFER**

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(57) **ABSTRACT**

A system for optimizing the number of dies that can be fabricated on a wafer uses a die number optimization (DNO) routine to determine a maximum number of dies for a target die area (TDA), and generate an initial result list of die shapes that have the maximum number of dies for the TDA. Optionally, a die size optimization (DSO) routine can be executed to determine a list of die shapes having a maximum die area corresponding to the maximum number of dies, a first list of optimized die shapes having a maximum area utilization (AU) for a decreased TDA, and/or a second list of optimized die shapes having a minimum AU for an increased TDA. A candidate list (CL) of the various die shapes can be generated, and entries from the CL automatically selected and/or displayed to indicate proposed wafer layouts.

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USPC **716/135**; 716/134

(58) **Field of Classification Search**
USPC 716/132–135
See application file for complete search history.

24 Claims, 11 Drawing Sheets

