

ABSTRACT

TEMPLATE REPLICATION

Methods, systems, and apparatus for identifying dimensional attributes of a first active area of a template; based at least in part on the dimensional attributes of the first active area, determining a desired magnification correction of a second active area of a substrate; determining an out-of-plane distortion of the template, the substrate, or both; applying a back pressure to the template, the substrate, or both, to compensate for the out-of-plane distortion of the template, the substrate, or both; after compensating for the out-of-plane distortion of the template, the substrate, or both: i) contacting an imprint resist positioned on the substrate with the template such that pattern features in the first active area are filled by the imprint resist, and ii) applying an additional back pressure to the template, the substrate, or both, wherein the additional back pressure is selected such that the second active area exhibits the desired magnification correction.

(Figure 6)