

## ABSTRACT

### LIPSEALS AND CONTACT ELEMENTS FOR SEMICONDUCTOR ELECTROPLATING APPARATUSES

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Disclosed herein are lipseal assemblies for use in electroplating clamshells which may include an elastomeric lipseal for excluding plating solution from a peripheral region of a semiconductor substrate and one or more electrical contact elements. The contact elements may be structurally integrated with the elastomeric lipseal. The lipseal assemblies may include one or more flexible contact elements at least a portion of which may be conformally positioned on an upper surface of the elastomeric lipseal, and may be configured to flex and form a conformal contact surface that interfaces with the substrate. Some elastomeric lipseals disclosed herein may support, align, and seal a substrate in a clamshell, and may include a flexible elastomeric upper portion located above a flexible elastomeric support edge, the upper portion having a top surface and an inner side surface, the later configured to move inward and align the substrate upon compression of the top surface.

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FIG. 3A

