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(54) Title: LEADFRAME-LESS SEMICONDUCTOR DEVICE ASSEMBLIES WITH DUAL-SIDED COOLING

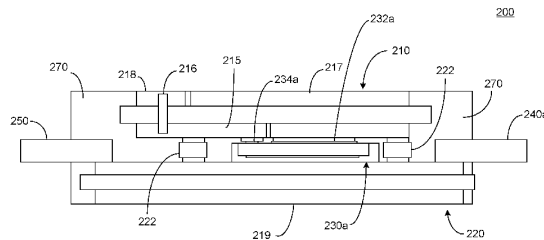


FIG. 2E

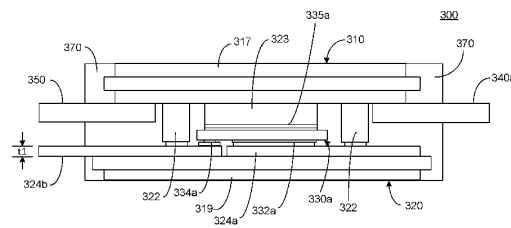


FIG. 3D

(57) Abstract: In a general aspect, a semiconductor device assembly (200) includes a first substrate (220) and a second substrate (210). Patterned metal layers (224, 214) respectively included with the first and second substrates are electrically coupled, respectively, with opposite sides of a pre-molded semiconductor device module (230a). A conductive via (216) is defined through the second substrate. The conductive via electrically couples a signal terminal of the module with another patterned metal layer (217) disposed on a surface of the second substrate opposite the first patterned metal layer.

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