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# United States Patent [19]

**Richiuso**

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[54] **METHOD FOR PROGRAMMABLE  
INTEGRATED PASSIVE DEVICES**

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[73] Assignee: **California Micro Devices, Inc.**,  
Milpitas, Calif.

[21] Appl. No.: **08/953,350**

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[51] **Int. Cl.<sup>6</sup>** ..... **H01L 21/8256**

[52] **U.S. Cl.** ..... **438/381; 438/239**

[58] **Field of Search** ..... 438/238, 239,  
438/381, 382; 257/390-391, 532-535

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*Primary Examiner*—Jey Tsai

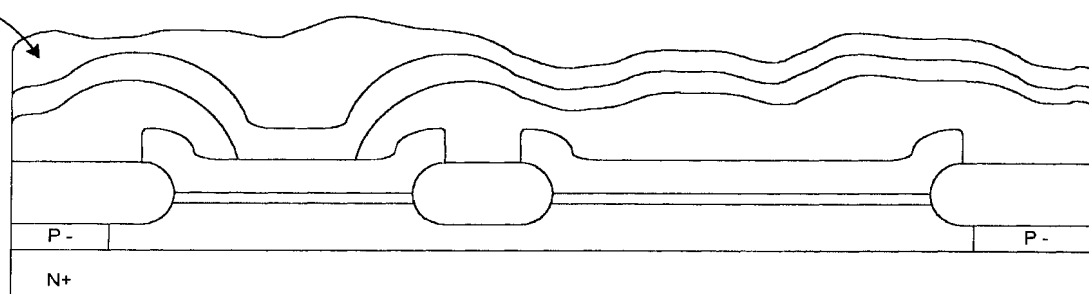
*Attorney, Agent, or Firm*—Beyer & Weaver LLP

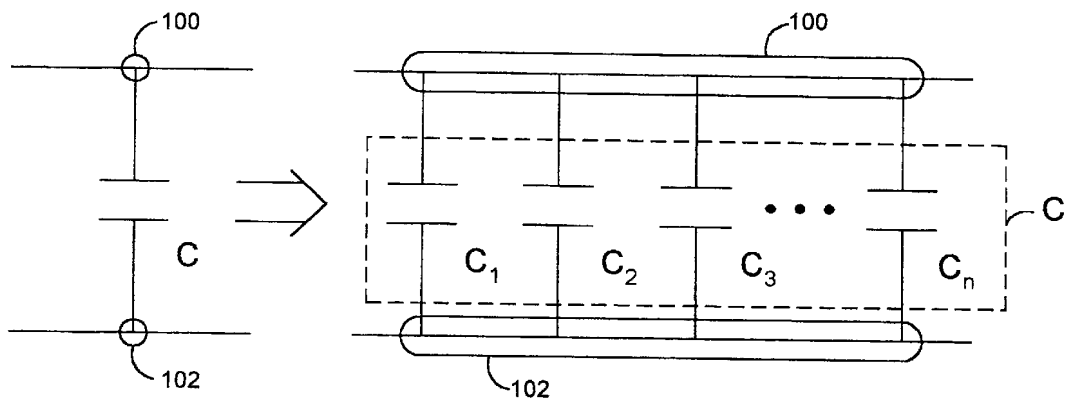
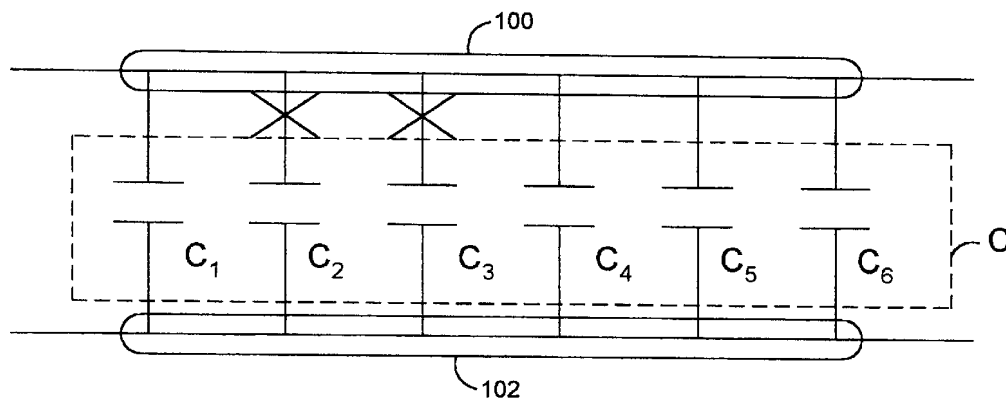
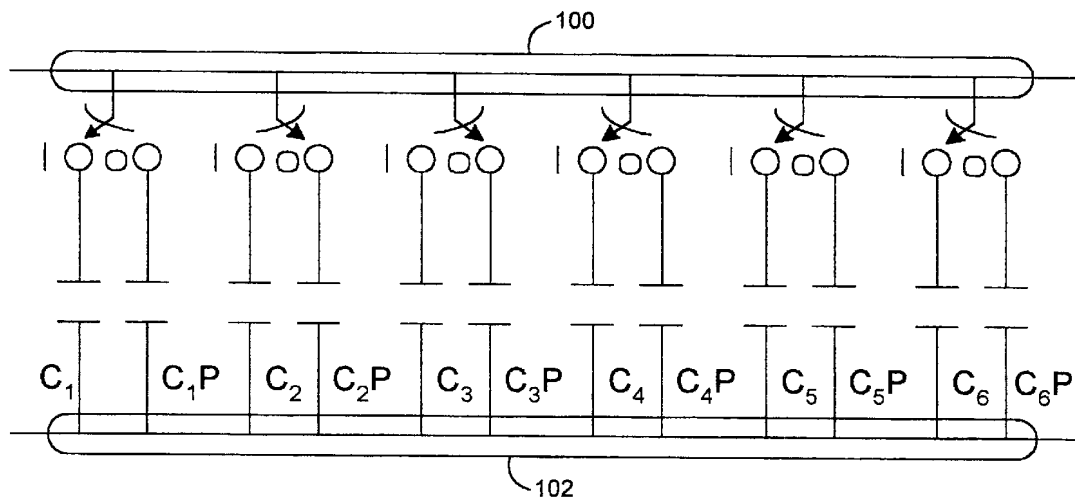
[57] **ABSTRACT**

A method for endowing an integrated passive device array structure with a programmable value during manufacturing. The method includes forming a substantially conductive first layer and forming a plurality of passive device array elements of the integrated passive device array structure above the substantially conductive first layer. The method further includes forming an insulating layer above the plurality of passive device array elements. There is further included selectively forming vias the insulating layer. The vias facilitate electrical connections between selected ones of the plurality of passive device array elements with a substantially conductive second layer subsequently deposited above the insulating layer.

**14 Claims, 6 Drawing Sheets**

PASSIVATION



**FIG. 1A****FIG. 1B****FIG. 1C**

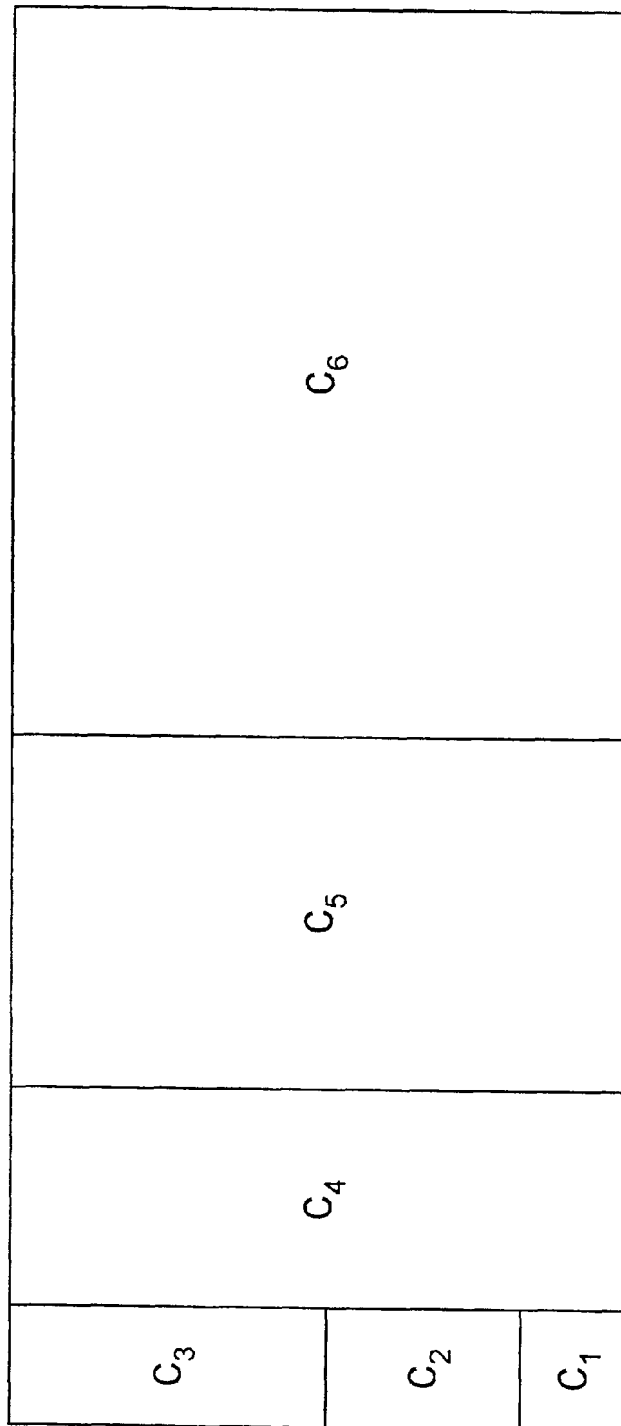


FIG. 2

FIG. 3A

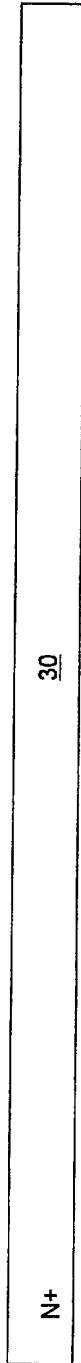


FIG. 3B

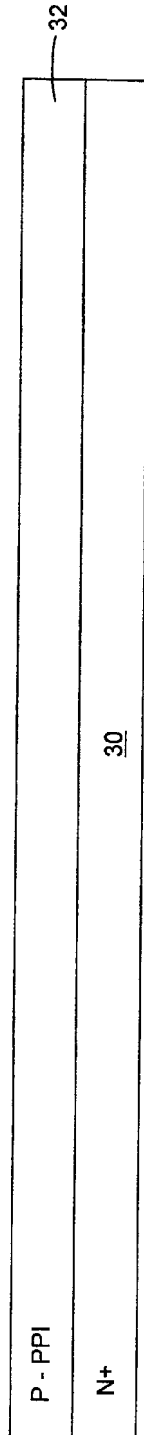


FIG. 3C

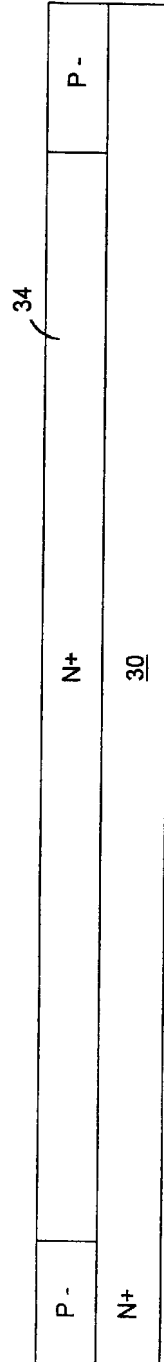
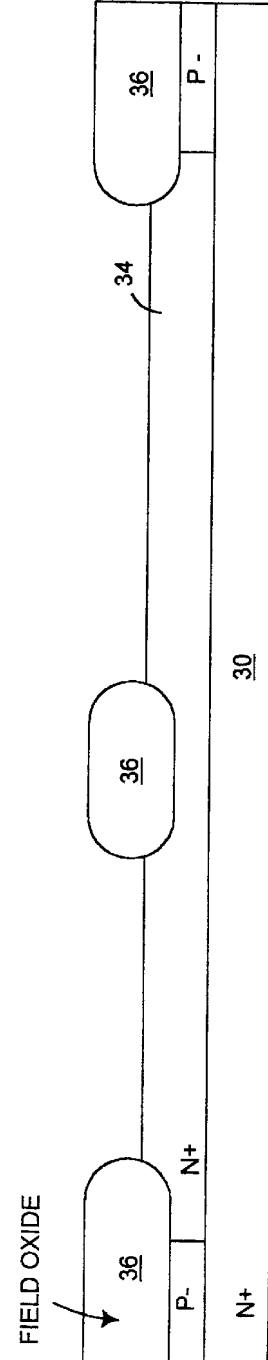


FIG. 3D



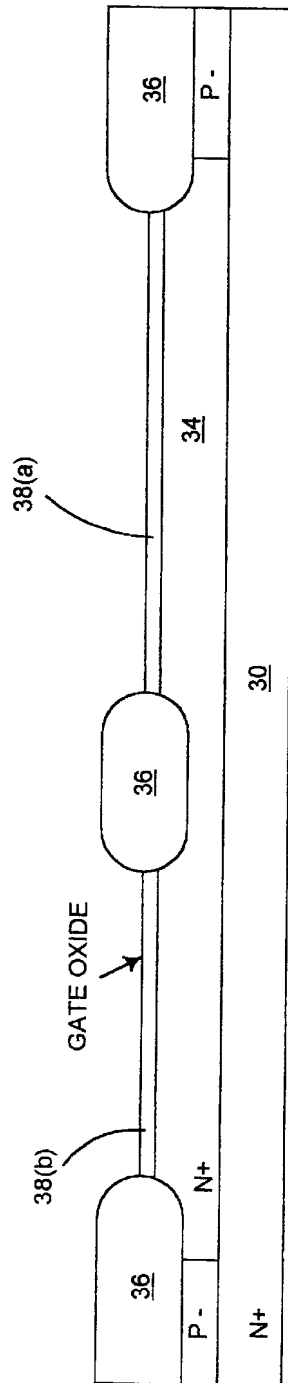


FIG. 3E

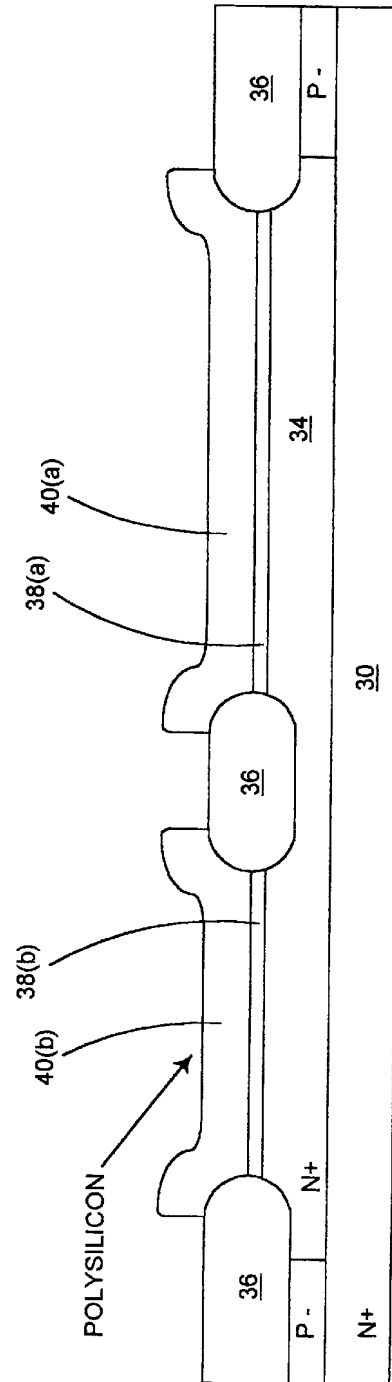


FIG. 3F

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