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.

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[51] **Int. Cl.⁶** **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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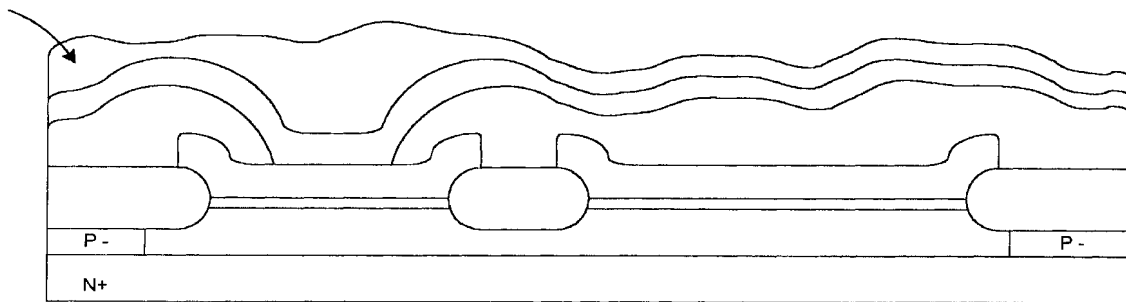|		
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Primary Examiner—Jey Tsai
Attorney, Agent, or Firm—Beyer & Weaver LLP

[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 vais 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.

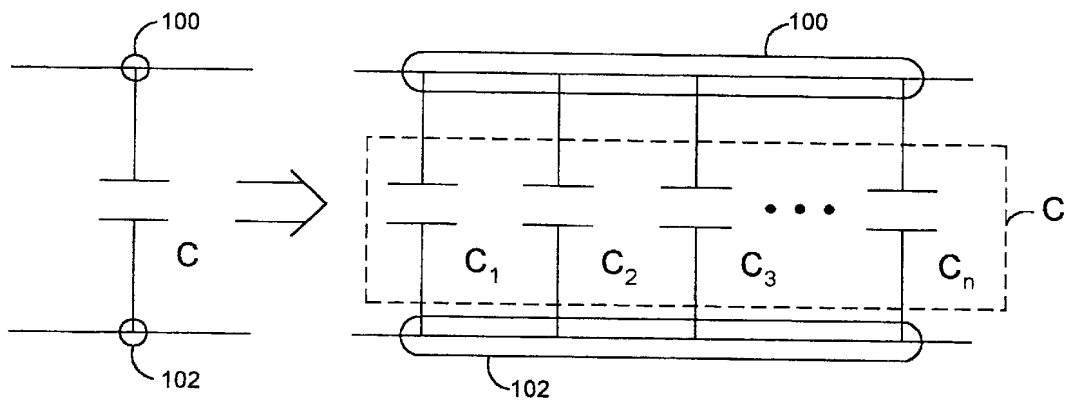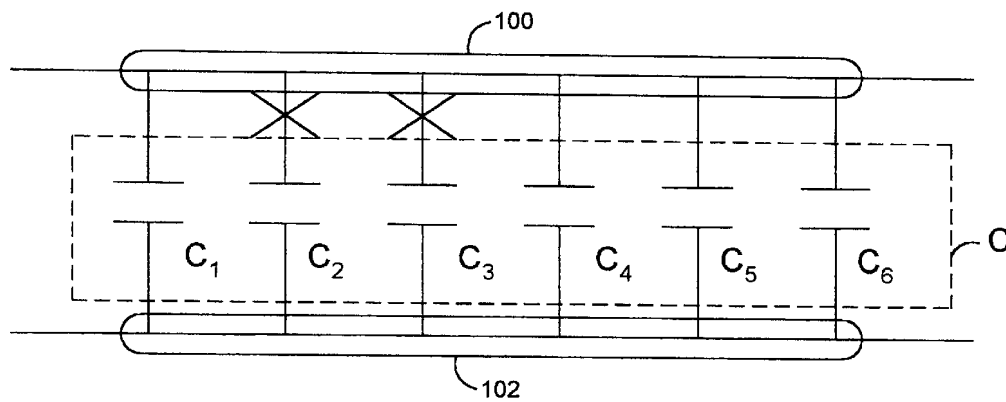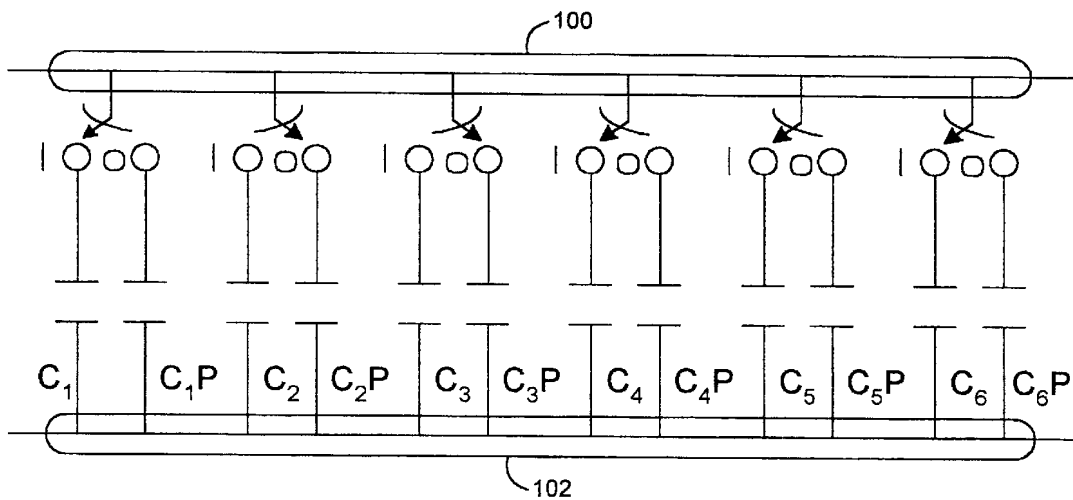**14 Claims, 6 Drawing Sheets**

PASSIVATION

P -

P -

N+

FIG. 1A

FIG. 1B

FIG. 1C

C_6

C_5

C_4

C_3

C_2

C_1

FIG. 2

FIG. 3A

N+	30

FIG. 3B

P - PPI	30	32
N+		

FIG. 3C

P -	N+	34	P -
N+	30		

FIG. 3D

FIELD OXIDE	36	36	34	36
P-	N+	30		P -
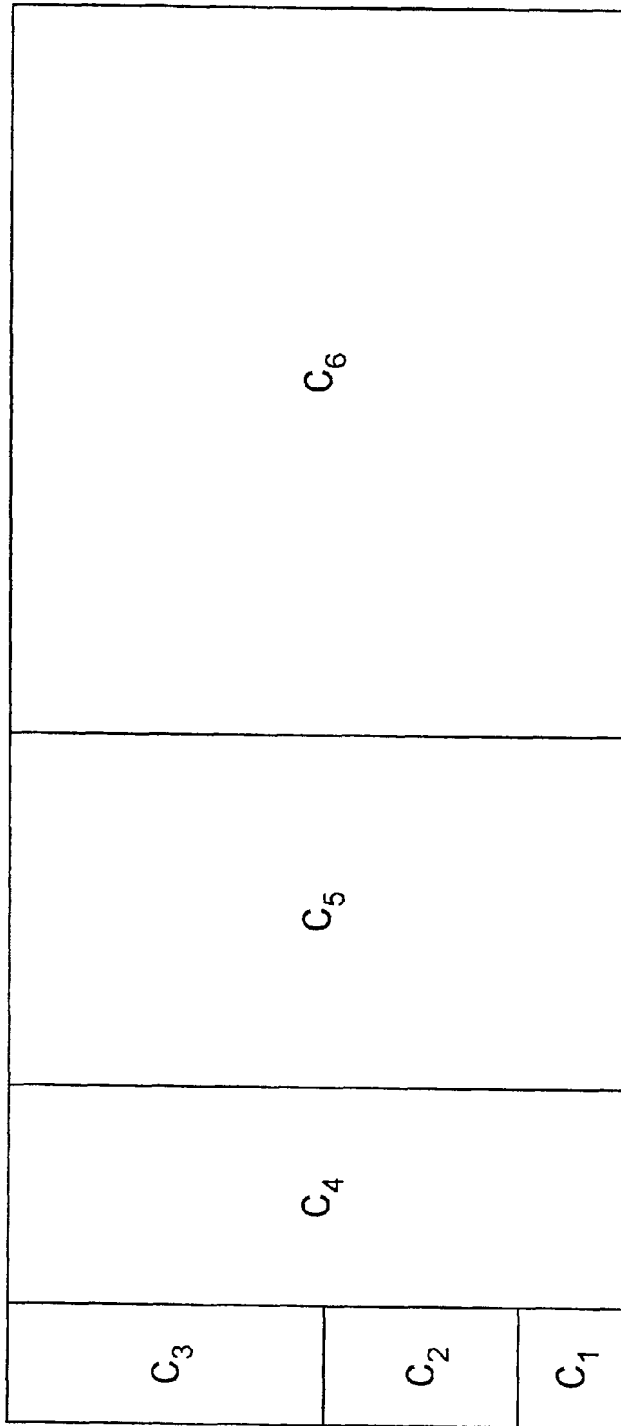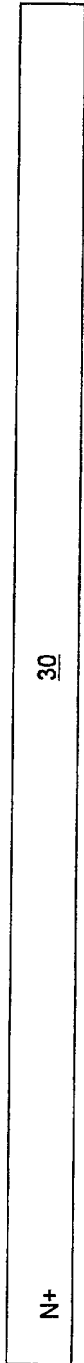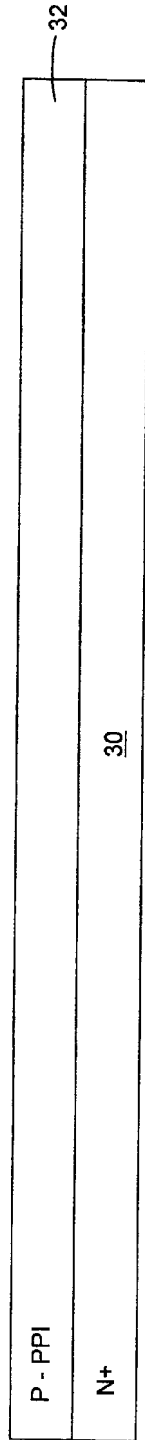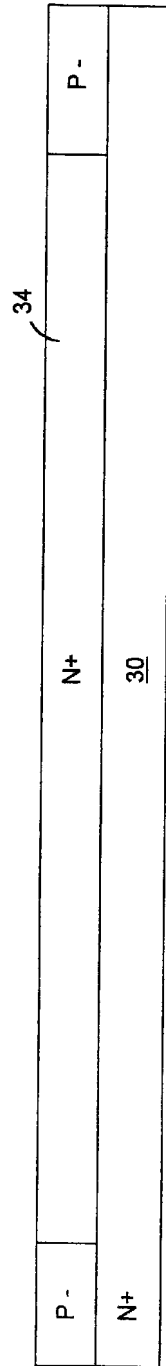
FIG. 3E

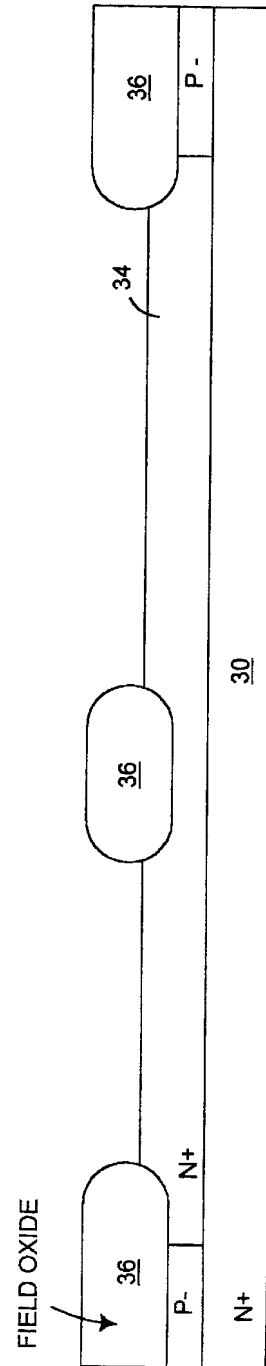FIG. 3F

DOCKET ALARM
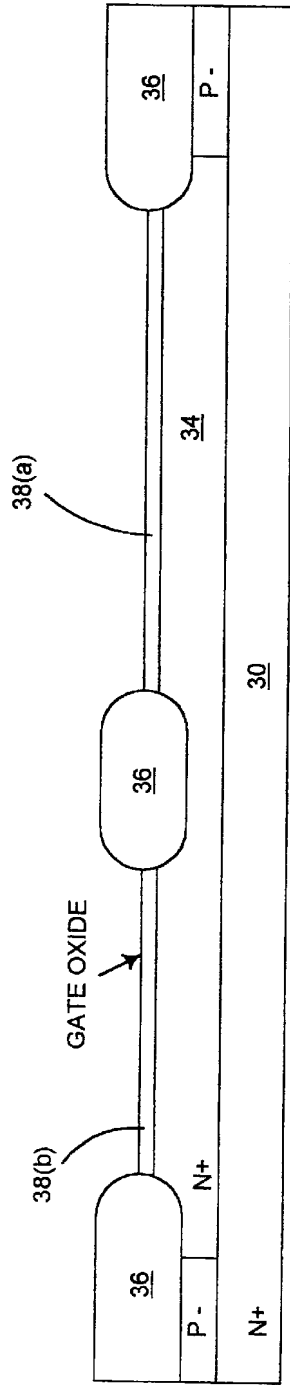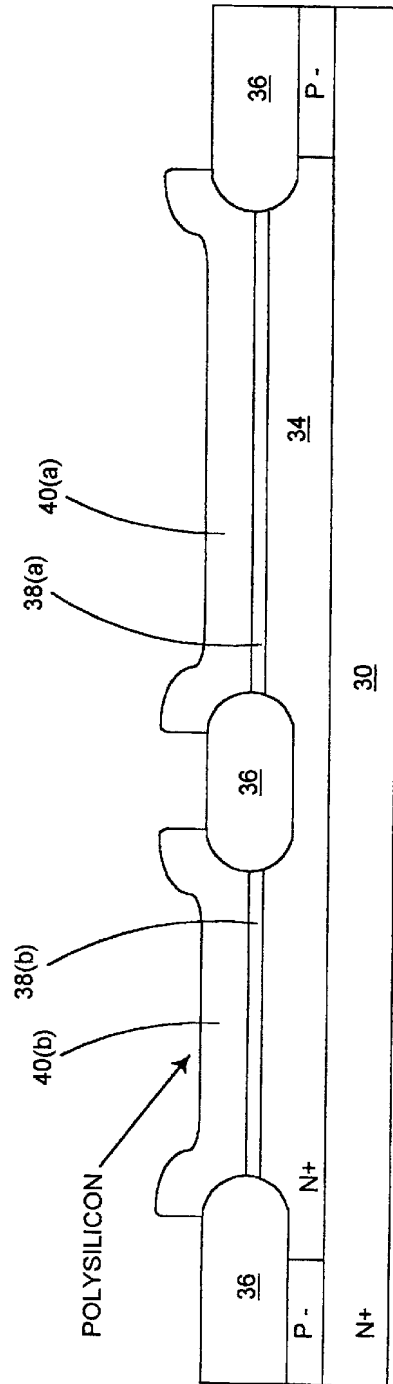
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