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(71) Applicant: ALPINE MICROSYSTEMS, INC. [US/US]; 3259 Kifer Road, Santa Clara, CA 95051 (US).

(72) Inventor: LaFLEUR, Mike; 4747 Atherton Avenue #1F, San Jose, CA 95130 (US).

(74) Agent: BROOKS, Kenneth; Law Office of Kenneth C. Brooks, P.O. Box 10417, Austin, TX 78766-1417 (US).

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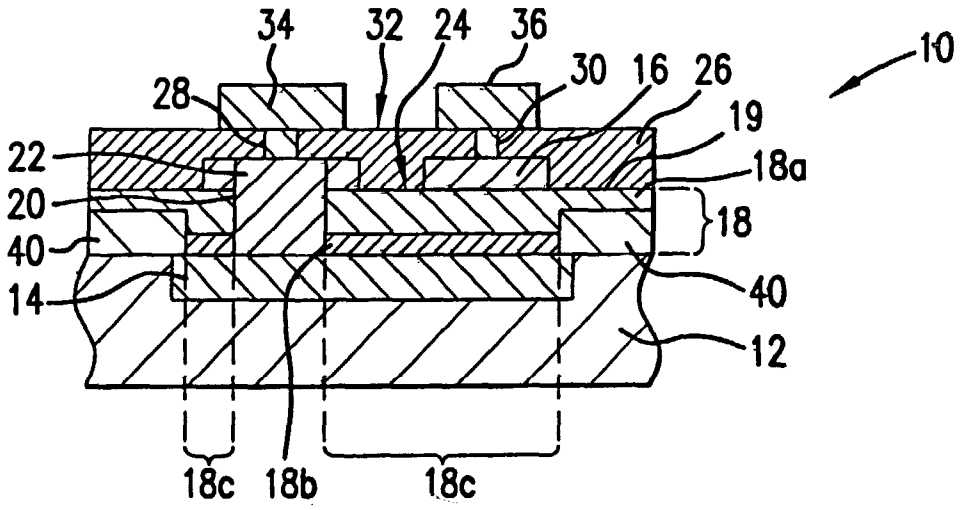
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(54) Title: THIN-FILM CAPACITOR HAVING MULTI-LAYER DIELECTRIC FILM INCLUDING SILICON DIOXIDE AND TANTALUM PENTOXIDE



(57) Abstract: A capacitor (10) and a method of forming the same, one embodiment of which includes depositing a multi-layer dielectric film (18a, 18b,) between first and second spaced-apart electrodes (14, 16). The multi-layer dielectric film includes first and second layers that have differing roughness. The layer of the dielectric film having the least amount of roughness is disposed adjacent to the first electrode (14). After depositing the second layer (18a) of the dielectric film adjacent to the first layer (18b), the second layer is annealed. An exemplary embodiment of the thin film capacitor forms the dielectric material from silicon dioxide (SiO_2) and tantalum pentoxide (Ta_2O_5).

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