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(71) Applicant *(for all designated States except US)*: **MICRON TECHNOLOGY, INC.** [US/US]; 8000 S. Federal Way, Boise, ID 83707-0006 (US).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: **ABBOT, Todd, R.** [US/US]; 493 S. Browning Avenue, Boise, ID 83709 (US).

(74) Agent: **LEWIS, Terril, G.**; Wong, Cabello, Lutsch, Rutherford & Brucculeri, L.L.P., 20333 SH 249, Suite 600, Houston, TX 77070 (US).

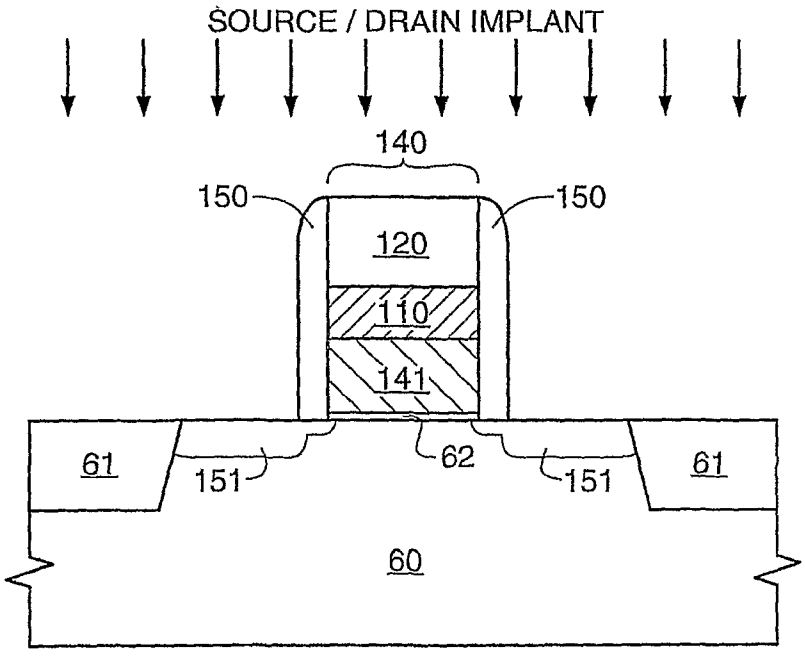
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(54) Title: METHODS OF FORMING A TRANSISTOR WITH AN INTEGRATED METAL SILICIDE GATE ELECTRODE




(57) Abstract: Methods of forming a transistor having integrated metal silicide transistor gate electrode an a semiconductor assembly are described. The transistor gate is partially fabricated by reacting the metal with epitaxial silicon while residing in a trench to form metal silicide. A transistor gate isolation capping layer is formed in the trench and an the metal silicide. Optional trench spacers can be added to reduce the critical dimension restraints of a given fabrication process and thus form a transistor having smaller feature sizes than the critical dimension.

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