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(71) Applicant *(for all designated States except US)*: **ADVANCED MICRO DEVICES, INC.** [US/US]; One AMD Place, Sunnyvale, CA 94088 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **SCHULTZ, Richard, T.** [US/US]; 4243 Widgeon Street, Fort Collins, CO 80526 (US).

(74) Agents: **RECKAMP, Christopher, J.** et al.; Vedder Price P.C., 222 N. LaSalle Street, Chicago, IL 60601 (US).

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(54) Title: INTEGRATED FIN-BASED FIELD EFFECT TRANSISTOR (FINFET) AND METHOD OF FABRICATION OF SAME

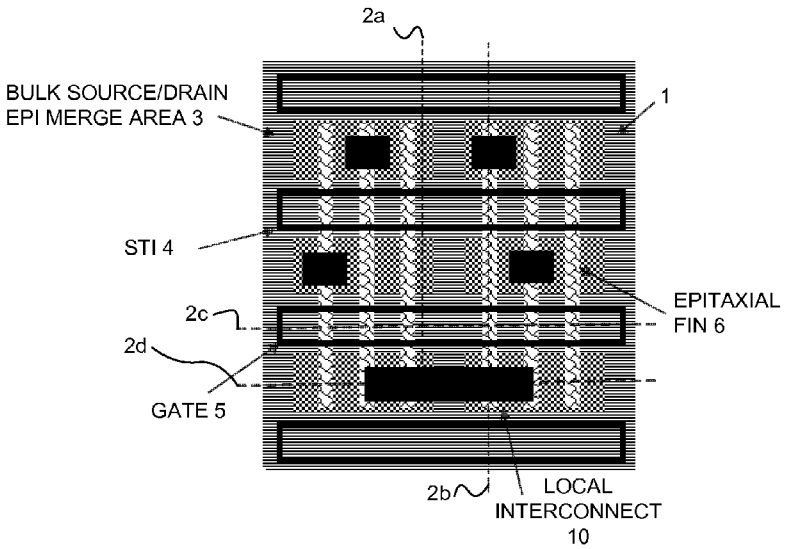


FIG. 1

(57) Abstract: An integrated fin-based field effect transistor (FinFET) and method of fabricating such devices on a bulk wafer with EPI-defined fin heights over shallow trench isolation (STI) regions. The FinFET channels overlie the STI regions within the semiconductor bulk, while the fins extend beyond the STI regions into the source and drain regions which are implanted within the semiconductor bulk. With bulk source and drain regions, reduced external FinFET resistance is provided, and with the fins extending into the bulk source and drain regions, improved thermal properties is provided over conventional silicon on insulator (SOI) devices.

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