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**SHARMA et al.**(10) **Pub. No.: US 2024/0215222 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **INTEGRATED CIRCUIT STRUCTURES  
HAVING BACKSIDE POWER DELIVERY  
AND SIGNAL ROUTING FOR FRONT SIDE  
DRAM****Publication Classification**(51) **Int. Cl.**  
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Portland, OR (US)(21) Appl. No.: **18/088,543**(22) Filed: **Dec. 24, 2022**(57) **ABSTRACT**

Structures having backside power delivery and signal routing for front side DRAM are described. In an example, an integrated circuit structure includes a front side structure including a dynamic random access memory (DRAM) layer having one or more capacitors over one or more transistors, and a plurality of metallization layers above the DRAM layer. A backside structure is below and coupled to the transistors of the DRAM layer, the backside structure including metal lines for power delivery and signal routing to the one or more transistors of the DRAM layer.

