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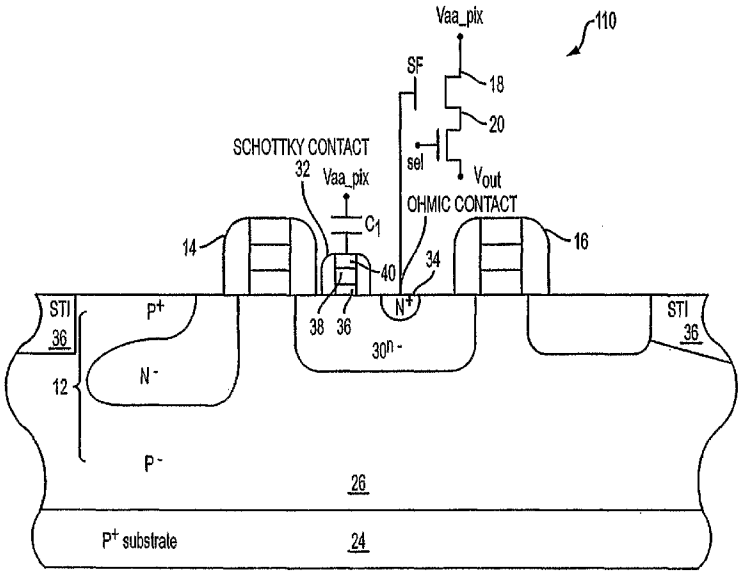
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(54) Title: DUAL CONVERSION GAIN IMAGER PIXEL USING SCHOTTKY AND OHMIC CONTACTS TO THE FLOATING DIFFUSION REGION AND METHODS OF FABRICATION AND OPERATION



(57) Abstract: An imager with dual conversion gain charge storage, and thus improved dynamic range, comprises a dual conversion gain element (e.g., Schottky diode) coupled between a floating diffusion region and a respective capacitor. The dual conversion gain element switches in the capacitance of the capacitor, in response to charge stored at the floating diffusion region, to change the conversion gain of the floating diffusion region from a first conversion gain to a second conversion gain. An ohmic contact between the gate of a source follower transistor and the floating diffusion region assists in the readout of the dual conversion gain output signal of a pixel.

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