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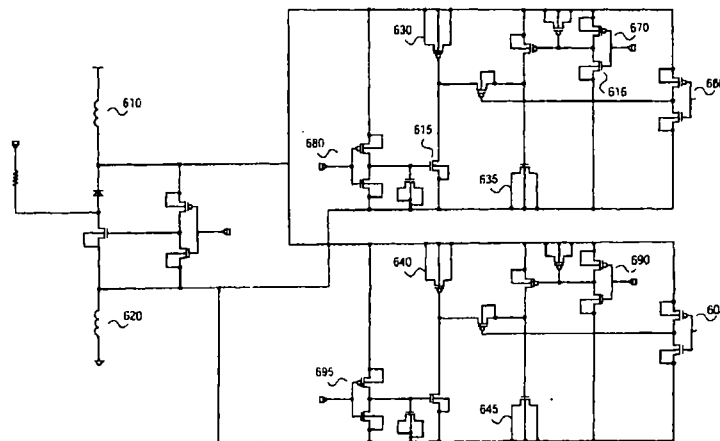
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(54) Title: OUTPUT BUFFER WITH CHARGE-PUMPED NOISE CANCELLATION



ACTION



(57) Abstract: A circuit is provided that has an output buffer connected to one of a plurality of output pads. A power source is connected to one of the plurality of output pads. A first pair of capacitors is connected to the power source. A second pair of capacitors is connected to the first pair of capacitors and the power source. A first pair of signal sources are connected to the first pair of capacitors. A second pair of signal sources connected to the second pair of capacitors. The first pair of signal sources and the second pair of signal sources control discharge to the power source and recharge to the power source of the first pair of capacitors and the second pair of capacitors to cancel out noise caused by either a voltage or current switching transient. Also, a method is provided for sending data to an output buffer, determining data to be clocked the next cycle, and controlling a charge-pump circuit to compensate for a voltage transition from one of high-to-low and low-to-high. The method also provides that noise resulting from a voltage transition at an output is cancelled before occurring by the charge-pump circuit.

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