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(54) **LOW POWER INTERCONNECT USING RESONANT DRIVE CIRCUITRY**

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(57) **ABSTRACT**

A field programmable gate array (FPGA) comprises a set of configurable logic blocks (CLBs), input/output blocks (IOBs), and interconnect wiring for communicating data between the CLBs and IOBs. A resonating circuit provides a resonating signal to the circuit blocks. The circuit blocks provide the resonating signal to the interconnect wires to communicate a first binary value, and a static voltage to communicate a second binary value. The output signals of the circuit blocks change state when the resonating signal is at or near the static voltage. This reduces switching losses that exist within prior art FPGAs.