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(54) Title: QUANTUM COUPLER FACILITATING SUPPRESSION OF ZZ INTERACTIONS BETWEEN QUBITS

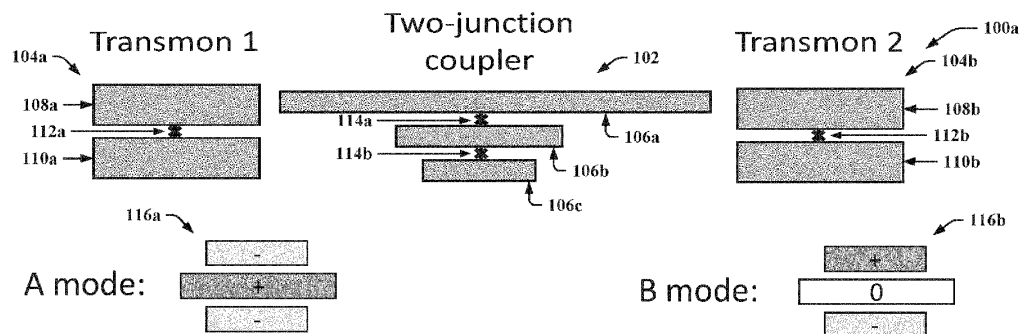


FIG. 1A

(57) Abstract: Devices and/or computer-implemented methods to facilitate ZZ cancellation between qubits are provided. According to an embodiment, a device can comprise a coupler device that operates in a first oscillating mode and a second oscillating mode. The device can further comprise a first superconducting qubit coupled to the coupler device based on a first oscillating mode structure corresponding to the first oscillating mode and based on a second oscillating mode structure corresponding to the second oscillating mode. The device can further comprise a second superconducting qubit coupled to the coupler device based on the first oscillating mode structure and the second oscillating mode structure.

[Continued on next page]

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