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(54) **Title:** SELECTIVE FREQUENCY SHIFTING OF QUBITS

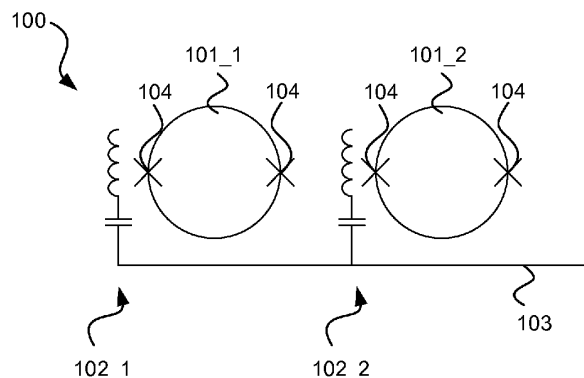


FIG. 1

(57) **Abstract:** It is an objective to provide a quantum computing system and an arrangement for selectively shifting qubit resonance frequencies. According to an embodiment, an arrangement for selectively shifting qubit resonance frequencies in a quantum computing system comprises a plurality of qubits comprising at least a first qubit and a second qubit; a plurality of coupling control resonators comprising at least a first coupling control resonator and a second coupling control resonator; and a coupling control signal line. The first coupling control resonator may be configured to shift the resonance frequency of the first qubit when the coupling control signal comprises a frequency component in the resonance frequency band of the first coupling control resonator. An arrangement, a quantum computing system, a method, and a computer program product are provided.

[Continued on next page]

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