Title (en)

METHOD FOR OPERATING A CIRCUIT HAVING A FIRST AND A SECOND QUBIT

Title (de)

VERFAHREN FÜR DEN BETRIEB EINES SCHALTKREISES MIT EINEM ERSTEN UND EINEM ZWEITEN QUBIT

Title (fr)

PROCÉDÉ DE FONCTIONNEMENT D'UN CIRCUIT AYANT UN PREMIER ET UN SECOND BIT QUANTIQUE

Publication

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Application

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Abstract (en)

[origin: WO2022043297A1] The invention relates to a method for operating a circuit having a first qubit (7) and a second qubit (3), which circuit is designed so that the frequency of the first qubit (7) differs from the frequency of the second qubit (3), and having a coupler (4) which couples the first qubit (7) and the second qubit (3), a cross-resonance pulse being transmitted to the first qubit (7), and the amplitude of the cross-resonance pulse being selected so that the two-qubit phase error is minimal or at least substantially minimal in terms of amount. The two-qubit phase error is determined by measuring the qubit Hamiltonian value and measuring the coupling strength of the ZZ interaction in kilohertz precision. A high two-qubit gate fidelity can be achieved by the invention.

IPC 8 full level

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CPC (source: EP US)

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