

Title (en)  
QUBIT FREQUENCY TUNING STRUCTURES AND FABRICATION METHODS FOR FLIP CHIP QUANTUM COMPUTING DEVICES

Title (de)  
QUBIT-FREQUENZABSTIMMUNGSSTRUKTUREN UND HERSTELLUNGSVERFAHREN FÜR FLIP-CHIP-  
QUANTENRECHENVORRICHTUNGEN

Title (fr)  
STRUCTURES D'ACCORD DE FRÉQUENCE DE BIT QUANTIQUE ET PROCÉDÉS DE FABRICATION POUR DISPOSITIFS INFORMATIQUES  
QUANTIQUES DE PUCE RETOURNÉE

Publication  
**EP 3956825 A1 20220223 (EN)**

Application  
**EP 20719425 A 20200415**

Priority  
• US 201916389001 A 20190419  
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• EP 2020060612 W 20200415

Abstract (en)  
[origin: WO2020212437A1] A quantum computing device includes a first chip having a first substrate and one or more qubits disposed on the first substrate. Each of the one or more qubits has an associated resonance frequency. The quantum computing device further includes a second chip having a second substrate and at least one conductive surface disposed on the second substrate opposite the one or more qubits. The at least one conductive surface has at least one dimension configured to adjust the resonance frequency associated with at least one of the one or more qubits to a determined frequency adjustment value.

IPC 8 full level  
**G06N 10/00** (2022.01); **B82Y 10/00** (2011.01); **H01L 39/22** (2006.01)

CPC (source: EP IL KR)  
**B82Y 10/00** (2013.01 - IL); **G06N 10/00** (2019.01 - EP IL); **G06N 10/40** (2022.01 - IL KR); **H01L 29/66977** (2013.01 - IL KR);  
**H10N 60/01** (2023.02 - EP IL KR); **H10N 60/805** (2023.02 - EP IL KR); **H10N 69/00** (2023.02 - EP IL KR); **B82Y 10/00** (2013.01 - EP KR);  
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Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**WO 2020212437 A1 20201022**; AU 2020259830 A1 20210930; AU 2020259830 B2 20230810; BR 112021020936 A2 20220125;  
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