

INTEGRATED CIRCUIT ARCHITECTURE WITH STRONGLY COUPLED LC TANKS

ABSTRACT

An integrated circuit for a radio frequency (RF) circuit such as a voltage controlled oscillator or an injection locked frequency divider is provided. The integrated circuit architecture includes a primary LC tank circuit comprising a first inductor and a first capacitive device connected in parallel and one or more secondary LC tank circuits, each comprising an inductor and a capacitive device connected in parallel. Each of the one or more secondary LC tank circuits is strongly coupled to the primary LC tank circuit and to each other either electrically, magnetically or a combination of electrically and magnetically.

Fig. 1