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Patent- und Rechtsanwälte

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(54) **PHASE SHIFT CIRCUIT AND MULTIBIT PHASE SHIFTER**

(57) A phase-shifting circuit includes: a first parallel circuit which is connected across input and output terminals of a high frequency signal, composed of a first inductor and a first switching element that exhibits a through state in an ON state and a capacitive property in an OFF state, and produces parallel resonance at a prescribed frequency when the first switching element is in the OFF state; a series circuit composed of a second inductor and a third inductor and connected in parallel with the first parallel circuit; a capacitor having its first terminal connected to a point of connection of the second and third inductors; and a second parallel circuit which is connected across a second terminal of the capacitor

and a ground, composed of a fourth inductor and a second switching element that exhibits a through state in an ON state and a capacitive property in an OFF state, and produces parallel resonance at a prescribed frequency when the second switching element is in the OFF state. The phase-shifting circuit establishes by switching an operation mode of setting the first switching element at the ON state and the second switching element at the OFF state, or an operation mode of setting the first switching element at the OFF state and the second switching element at the ON state.

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FIG.1

