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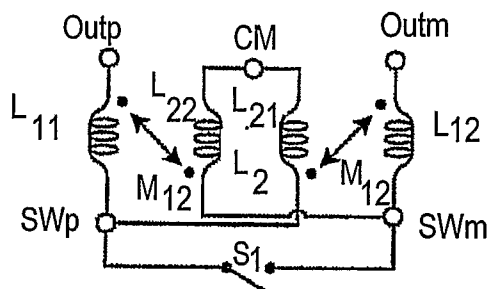
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(54) Title: INDUCTOR DEVICE FOR MULTIBAND RADIO FREQUENCY OPERATION



(57) Abstract: The inductance of a monolithic planar inductor is distributed into smaller inductor portions (L_{11} , L_{21} , L_{22} , L_{12}). The smaller inductor portions (L_{11} , L_{21} , L_{22} , L_{12}) are provided in a cascode configuration in a manner that causes inductor to function as a differential inductor device. The node (CM) between the immediate inductor portions (L_{21} , L_{22}) is a common-mode point of the inductor device, which is typically connected to the signal ground. The nodes (Outm, Outp) at the outer ends of the inductor portions (L_{12} , L_{11}) are differential outputs, e.g. output nodes of an amplifier device at the

interface of the device itself and the following device (e.g. input stage of a mixer). Some of the inductor portions are arranged to be symmetrically by-passed or shortcut (S_1) in relation to the common point in one or more steps for operation in one or more higher radio frequency band. By means of the switchable symmetric shortcut, a controllable inductance step can be provided. The common-mode signal is affected the same inductance regardless of the controlled condition.

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