Abstracts

Accurate distributed inductance of spiral resonators

A simple procedure for calculation of the distributed inductance of spiral resonators and micro-inductors is derived, including all possible mutual inductances. It is applicable for spiral configurations from rectangular to smooth circular. Using this procedure and an accurate formula for distributed capacitance of a spiral resonator, the resonant frequency was accurately predicted. If the surface resistance of the conductors is known, the unloaded quality factor of any spiral resonator can also be calculated.

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