Abstracts

High Q CMOS-compatible microwave inductors using double-metal interconnection silicon technology

Min Park, Seonghearn Lee, Hyun Kyu Yu, Jin Gun Koo and Kee Soo Nam. "High Q CMOS-compatible microwave inductors using double-metal interconnection silicon technology." 1997 Microwave and Guided Wave Letters 7.2 (Feb. 1997 [MGWL]): 45-47.

The authors' aim is to demonstrate the possibility of building high quality factor (Q) integrated inductors in the conventional complementary metal-oxide semiconductor (CMOS) process without any additional processes of previous papers, such as thick gold layer or multilayer interconnection. The comparative analysis is extensively carried out to investigate the detailed variation of Q performance according to inductor shape and substrate by varying the substrate resistivity with circular and rectangular shape. The high Q of nearly 12 is achieved from the fabricated inductors with 2 /spl mu/m metal thickness on the 2 k/spl Omega//spl middot/cm silicon substrate using the CMOS process.

❑ Return to main document.