Abstracts

Development of three dimensional ceramic-based MCM inductors for hybrid RF/microwave applications

A. Sutono, A. Pham, J. Laskar and W.R. Smith. "Development of three dimensional ceramic-based MCM inductors for hybrid RF/microwave applications." 1999 Radio Frequency Integrated Circuits (RFIC) Symposium 99. (1999 [RFIC]): 175-178.

We present the design, development and characterization of planar and multilayer (3-D) inductor structures fabricated on a multi-layer ceramic-based Multi-Chip-Module (MCM-C) technology. We experimentally demonstrate the feasibility of utilizing both planar and compact 3-D helical inductors for hybrid RF and microwave system implementation. For the same numbers of turns and dimensions as the conventional planar inductor, the 3-D helical inductors occupies significantly less area and demonstrate better quality (Q) factor, higher inductance and comparable self resonant frequency (SRF).

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