Abstracts

Thick metal CMOS technology on high resistivity substrate for monolithic 980 MHz and 1.9 GHz CMOS LNAs

C.S. Kim, M. Park, C.H. Kim, H.K. Yu, Yu.K. Lee, D.Y. Kim and H. Cho. "Thick metal CMOS technology on high resistivity substrate for monolithic 980 MHz and 1.9 GHz CMOS LNAs." 1999 MTT-S International Microwave Symposium Digest 99.2 (1999 Vol. II [MWSYM]): 573-576 vol.2.

Thick metal CMOS technology on high resistivity substrate (RF CMOS technology) is demonstrated for the RF IC applications, and we firstly implemented it in monolithic 900 MHz and 1.9 GHz LNAs. The 1.9 GHz LNA shows a NF of 2.8 dB that is an excellent noise performance compared with the off-chip matched CMOS LNAs. Also the 900 MHz LNA shows a high gain of 18.8 dB and NF of 3.2 dB. The proposed RF CMOS technology is a very simple process, showing a high reproducibility, and the monolithic LNAs employing the technology show a good and uniform RF performances.

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