

Design guide of coupling between inductors and its effect on reverse isolation of a CMOS LNA

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To establish the design guide on coupling between inductor pairs, we measured the magnitude of the electromagnetic coupling between inductors with the variation of physical separation and substrate resistivity. We also found that the coupling effect degrades the reverse isolation of L-band CMOS LNAs, and analyzed several LNAs fabricated with different fabrication technology. Furthermore, we proposed inductors for preventing the coupling, and its coupling reduction effect on the LNA is demonstrated.

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