Abstracts

High-performance planar inductor on thick oxidized porous silicon (OPS) substrate

Choong-Mo Nam and Young-se Kwon. "High-performance planar inductor on thick oxidized porous silicon (OPS) substrate." 1997 Microwave and Guided Wave Letters 7.8 (Aug. 1997 [MGWL]): 236-238.

To obtain a high-performance planar inductor, we used the oxidized porous silicon (OPS) layer with 25-/spl mu/m-thick SiO/sub 2/ as substrate. The measured radio frequency (RP) performances of the planar Inductor on the OPS layer are comparable to those on the semi-insulating GaAs substrate. For a 6.29 nH inductor, resonant frequency of 13.8 GHz and maximum quality factor (Q) of 13.3 are obtained. These results show that the utilisation of the OPS layer can push silicon passive monolithic microwave integrated circuit (MMIC) technology at least up to 12 GHz.

❑ Return to main document.