Abstracts

RF loss and crosstalk on extremely high resistivity (10 k-1 M/spl Omega/-cm) Si fabricated by ion implantation

Y.H. Wu, A. Chin, K.H. Shih, C.C. Wu, C.P. Liao, S.C. Pai and C.C. Chi. "RF loss and crosstalk on extremely high resistivity (10 k-1 M/spl Omega/-cm) Si fabricated by ion implantation." 2000 MTT-S International Microwave Symposium Digest 00.1 (2000 Vol. I [MWSYM]): 221-224.

We have achieved 1.6 M/spl Omega/-cm resistivity using ion implantation that has little negative effect on MOS devices. Extremely low loss and cross coupling of 6.3 and -79 dB/cm (10 /spl mu/m gap) at 20 GHz are measured with 1 /spl mu/m Al, respectively, which is due to implant induced trap with /spl sim/1 ps carrier lifetime and stable to 400/spl deg/C.

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