Abstracts

MOS varactors with ferroelectric films

S. Gevorgian, S. Abadei, H. Berg and H. Jacobsson. "MOS varactors with ferroelectric films." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1195-1198 vol.2.

The microwave performance of MOS varactors with additional ferroelectric film (MFOS) is presented. The tunability of MFOS varactors above 20 GHz is more than 10% higher than that of simple MOS varactors, with sufficiently high Q factor. The proposed MFOS varactor has a simple design and is compatible with standard CMOS processes. It may have symmetric C-V curves at rather high tuning voltages and superior performance at millimetre wave frequencies. In experiments varactors are based on NaNbO/sub 3/ films grown on high resistivity silicon substrates.

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