Abstracts

Low frequency noise in boron doped poly-SiGe resistors

Kun-Ming Chen, Guo-Wei Huang, Jui-Feng Kuan, Hsiang-Jen Huang, Chun-Yen Chang and Tsung-His Yang. "Low frequency noise in boron doped poly-SiGe resistors." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 405-408 vol.1.

Low frequency noise in moderately and heavily boron doped poly-SiGe resistors was studied. The poly-SiGe films were grown using an ultra-high vacuum chemical molecular epitaxy system. The Ge content is in the range of 0 /spl sim/ 36%. The low frequency noise was measured at room temperature. We found that the low frequency noise in poly-SiGe was almost independent of Ge content for heavily doped samples. However, for moderately doped samples, the noise decreases with increasing Ge incorporation. This is due to the lower grain boundary barrier height for high Ge content samples. The carrier mobility fluctuation model can explain this phenomenon.

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