Performance of GaAs on silicon power amplifier for wireless handset applications

N. Escalera, R. Emrick, S. Franson, B. Farber, G. Garrison, J. Holmes, S. Rockwell and B. Bosco. "Performance of GaAs on silicon power amplifier for wireless handset applications." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 1031-1034 vol.2.

Recently RF devices formed by the epitaxial growth of GaAs on a Si substrate have been demonstrated. The RF performance of these new devices compares well with devices on a conventional GaAs substrate process. This new GaAs-on-Si technology has the potential for replacing expensive RF components such as power amplifiers with lower cost devices fabricated on GaAs-on-Si while still maintaining good DC-RF performance. This paper presents the RF performance of these GaAs/STO/Si devices and shows for the first time their viability as power amplifiers in wireless handsets.

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