

Multifunction SAG Process for High-Yield, Low-Cost GaAs Microwave Integrated Circuits

I.J. Bahl, M.J. Drinkwine, A.E. Geissberger, E.L. Griffin and J.A. Grzyb. "Multifunction SAG Process for High-Yield, Low-Cost GaAs Microwave Integrated Circuits." 1990 Transactions on Microwave Theory and Techniques 38.9 (Sep. 1990 [T-MTT] (Special Issue on Multifunction MMIC's and their System Applications)): 1175-1182.

A new fully planar, multifunction refractory self-aligned gate (MSAG) technology suitable for the fabrication of GaAs small-signal and power MMIC's is demonstrated in a manufacturing environment. We present data on the distribution of dc and RF performance and yield for pilot production of discrete FET's and MMIC's. Lots having good wafer yields have demonstrated average chip yields on PCM good wafers of 45%, 49%, and 36% for 2.5-8 GHz feedback amplifiers, 1 W C-band power amplifiers, and 4 W C-band power amplifiers, respectively.

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