Abstracts

Fabrication of Low Power, High-Speed GaAs LSI On-Board Baseband Switching Matrix

R. Yamamoto, K. Ueda, H. Nagao, T. Morimura, I. Eguchi, M. Kudoh, K. Kinuhata and P. Nuspl. "Fabrication of Low Power, High-Speed GaAs LSI On-Board Baseband Switching Matrix." 1986 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 86.1 (1986 [MCS]): 65-69.

A GaAs LSI On-Board Baseband Switching Matrix (BSM) for use in satellite communications for time-division multiple access (TDMA) system, has been designed and fabricated by using low dissipated Buffered-FET-Logic (BFL) with one level- shifting diode with the FET threshold voltage of about -0.5 V. For a 120 Mbit/s rate traffic signal to be used for TDMA , complete connectivity was confirmed for any possible switching pattern with a fast rise/fall time of about 1 ns at a power dissipation of 160 mW. The switch size is 16x4, expandable up to 16x16 by interbonding.

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