Abstracts

A New Approach to Active Phased Arrays Through RF-Wafer Scale Integration

L.R. Whicker, J.J. Zingaro, M.C. Driver and R.C. Clarke. "A New Approach to Active Phased Arrays Through RF-Wafer Scale Integration." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 1223-1226.

This paper describes a new approach to active phased array technology. Here, several modules are fabricated at the same time and placed in a layered structure. The layers include the RF modules, cooling manifold, dc bias distribution, RF manifold, and radiating elements. In this configuration, 16 or more T/R modules are fabricated on a single 3-inch GaAs wafer. The realization of multiple modules on a wafer is made possible by redundancy of circuit elements and novel mechanical switches. Preliminary results on these efforts are presented.

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