Abstracts

System-Level Integrated Circuits for Phased Array Antenna Applications

K.A. Shalkhauser, J.A. Windyka, D.C. Dening and M.J. Fithian. "System-Level Integrated Circuits for Phased Array Antenna Applications." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1593-1596.

A new, high-density microwave circuit has been developed for use in advanced communication system antennas. These System-Level Integrated Circuits, or "SLICs", include integral features and functions facilitating reliable operation, improved performance, and ready application. An optical fiber feeds both control and 20-GHz RF signals to an 8-element phased array module, wherein SLIC circuitry provides automatic gain control, thermal compensation, voltage regulation, control signal processing, and health/status feedback. Modules have been fabricated using the new SLIC MMICs and the Microwave High Density Intercomect (MHDI) multilayer lamination process.

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