

Abstracts

A Broadband 16 Port Modeformer System Using Computer Aided Design

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A 16-port broadband modeformer system has been developed to operate between C and Ku bands. The design approach is novel in that a unique computer modeling technique was developed and employed for design, optimization and integration of the system. The program employs exact analytical models for all components in the system such as 4-section tandem connected 90° hybrids, 180° hybrids, multisection phase shifters and line lengths. The overall system computer model employs special techniques to handle large (200 by 200) complex matrices. Measured data is presented which illustrates the accuracy with which the composite computer model predicts the actual hardware system performance.

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