

Transmission Line Coupled Active Microstrip Antennas for Phased Arrays

R. Ispir, S. Nogi, M. Sanagi and K. Fukui. "Transmission Line Coupled Active Microstrip Antennas for Phased Arrays." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 931-934.

An effective transmission line coupling network for spatial power combining and beam scanning purposes is reported. The harmful effect of radiative coupling is eliminated using a modified version of this network for peripheral elements. A technique to control the inter-element phase differences of planar arrays was also developed. Experiments on 1 x 4 and 2 x 2 oscillator arrays using the proposed coupling network agrees well with the theory.

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