# Abstracts

## Study of design parameters in waveguide-based spatial power combining amplifier arrays using FDTD

*M. Ozkar, G. Lazzi and A. Mortazawi. "Study of design parameters in waveguide-based spatial power combining amplifier arrays using FDTD." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1403-1406 vol.2.*

Performance measures such as active reflection coefficients, inter-element coupling and excitation uniformity for spatial power combining arrays are investigated. A coax-fed patch antenna array inside an oversized dielectric loaded waveguide is analyzed using a standard finite difference time domain (FDTD) approach with unsplit perfectly matched layer (PML) formulation. Results for a passive 4/spl times/4 waveguide-based quasi-optical array are presented as an example. The effects of design parameters (such as inter-element spacing and the distance of the array to the waveguide walls) on the performance of the array has been investigated for the 4/spl times/4 array example.

❑ Return to main document.