Abstracts

Broadband waveguide-based spatial combiners

A. Alexanian and R.A. York. "Broadband waveguide-based spatial combiners." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1139-1142.

An array of tapered slotlines is inserted between rectangular waveguides. Results for a 2/spl times/4 active array at X-band are presented, indicating good combining efficiency and thermal properties as well as excellent bandwidth. To increase the device packing density and remove the lower cutoff frequency of the rectangular waveguide a coaxial combiner is also proposed. A radial arrangement of tapered slotlines is placed between two flared coaxial lines. 64 elements are combined with low combining loss over the 5 to 20 GHz band.

❑ Return to main document.