Abstracts

Development of K-band spatial combiner using active array modules in an oversized rectangular waveguide

L.-Y.V. Chen and R.A. York. "Development of K-band spatial combiner using active array modules in an oversized rectangular waveguide." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 821-824.

This paper presents the development of a broadband spatial combining system based on the tapered-slot antenna arrays integrated in an oversized rectangular waveguide at K-band, which could accommodate 24 or more devices. The active antenna cards are designed and built monolithically, providing planar to planar transitions between the slot antennas and the transmission-line with low return loss. A proof-of-concept passive array has been developed for 18-22 GHz, and an 18 GHz amplifier has been fabricated using Flip-Chip technology (FCIC).

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