Abstracts

2 X 2 Quasi-Optical Power Combiner Array at 20 GHz (Special Section Short Papers)

S. Kawasaki and T. Itoh. "2 X 2 Quasi-Optical Power Combiner Array at 20 GHz (Special Section Short Papers)." 1993 Transactions on Microwave Theory and Techniques 41.4 (Apr. 1993 [T-MTT]): 717-719.

The design concept and the experimental results of a power combiner made of two FET oscillators for a quasi-optical array are reported. In order to demonstrate an approach by a quasi-optical method with a strongly coupled oscillator configuration, a 2 x 2 planar array is fabricated using a direct connection through a microstrip line, The input impedance of the slot radiator is taken into account as a circuit element to investigate the passive part of the array. In order to accomplish a sum radiation pattern, the length of the microstrip feed lines are regulated. At an operating frequency of 20 GHz, sum radiation patterns were observed in both the H-plane and the E-plane.

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