Abstracts

A bi-directional quasi-optical lens amplifier (Dec. 1997, Part II [T-MTT])

S. Hollung, A.E. Cox and Z.B. Popovic. "A bi-directional quasi-optical lens amplifier (Dec. 1997, Part II [T-MTT])." 1997 Transactions on Microwave Theory and Techniques 45.12 (Dec. 1997, Part II [T-MTT] (1997 Symposium Issue)): 2352-2357.

A 24-element bi-directional quasi-optical lens amplifier array is presented. The lens amplifier array is designed for X-band, and operates in transmission mode. Single-pole double-throw (SPDT) switches are used to switch between transmit and receive amplifiers. The lens amplifier array demonstrates gains of 5.5 dB at 10.1 GHz in receive mode, and 2 dB at 10.2 GHz in transmit mode, with more than 15-dB ON/OFF isolation. Several applications for the lens amplifier array are demonstrated: a quasi-optical transceiver front-end, reduction of multipath fading, and a multiuser frequency reuse application.

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