Abstracts

A 35 GHz Electronically Steered Line Array

R.J. Lang and B.J. Edward. "A 35 GHz Electronically Steered Line Array." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 937-940.

This paper details the design and evaluation of a Ka-band hybrid PIN diode phase shifter and its subsequent assembly into a phase steered line array with printed dipole radiating elements. Measured data are presented indicating a 3.9 dB phase shifter insertion loss at 35 GHz and beam-steering characteristics for the line-array that are commensurate with the phase shifter performance. The power handling capability is estimated to be in excess of 29 Watts CW. This work, we believe, demonstrates the feasibility of millimeter wave phased arrays based on solid-state technology.

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