Abstracts

Digital Phase Shifter Elements for a K/sub u/-Band Phased Array RADAR

A.R. Wolfe and M.E. Davis. "Digital Phase Shifter Elements for a K/sub u/-Band Phased Array RADAR." 1976 MTT-S International Microwave Symposium Digest of Technical Papers 76.1 (1976 [MWSYM]): 347-350.

A three-bit phased array element has been designed using PIN diode phase shifters and a printed circuit dipole for coupling the energy from the waveguide feed and radiating into free space. The element, including the coupling loss of the dipoles, has 3.2 dB insertion loss (average) with an rms loss variation of 0.5 dB, over the 16.0 to 16.5 dB frequency band. Data from 250 units is analyzed for the performance in the array.

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