

Abstracts

Linear Analog Hyperabrupt Varactor Diode Phase Shifters

E.C. Niehenke, V.V. DiMarco and A. Friedberg. "Linear Analog Hyperabrupt Varactor Diode Phase Shifters." 1985 MTT-S International Microwave Symposium Digest 85.1 (1985 [MWSYM]): 657-660.

Design and performance of analog phase shifters using hyperabrupt varactors with linear phase versus voltage is presented. Phase linearity of 22 degrees per volt ± 8 percent was achieved for a 100 degree S-band device with a phase deviation of 1 degree from linearity. At X-band, linear phase control of 270 degrees was achieved. The selection of the varactor diode capacitance versus voltage and matching circuits for linear performance are presented.

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