Abstracts

A Fast Low-Loss Microstrip p-i-n Phase Shifter

B. Glance. "A Fast Low-Loss Microstrip p-i-n Phase Shifter." 1979 Transactions on Microwave Theory and Techniques 27.1 (Jan. 1979 [T-MTT]): 14-16.

A 4-bit p-i-n phase shifter with low RF attentuation, fast switching time, and low switching power requirements is described. The circuit, made in microstripline, consists of four cells giving phase shifts of 180, 90, 45, and 22.5°, respectively. Each cell consists of a 3-dB coupler loaded by two p-i-n diodes. The transmission loss is 1.6 dB ± 0.2 dB over the operating bandwidth of 11.7-12.2 GHz for a biasing current of only 5 mA/cell. Switching time between phase states is 1 ns.

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