Abstracts

Octave-Band High Precision Balanced Modulator

Z. Adler and B. Smilowitz. "Octave-Band High Precision Balanced Modulator." 1984 MTT-S International Microwave Symposium Digest 84.1 (1984 [MWSYM]): 375-377.

This paper describes an octave bandwidth component that closely approximates an ideal bi-phase linear modulator at microwave frequencies. PIN diodes in a balanced configuration of hybrid couplers were combined to realize the component in a microstrip circuit. Phase errors of 2 degrees or less were achieved over an octave band for a bi-phase modulator application. The modulator was also used to form a frequency translator with a minimum carrier suppression of 30dB and sideband suppression of 20dB over the 4-10GHz frequency band.

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