Abstracts

A 10-GHz Single Sideband Modulator with 1-kHz Frequency Shift (Correspondence)

P.G. Brooker and J.D.E. Beynon. "A 10-GHz Single Sideband Modulator with 1-kHz Frequency Shift (Correspondence)." 1971 Transactions on Microwave Theory and Techniques 19.10 (Oct. 1971 [T-MTT]): 829-834.

A single sideband modulator which frequency shifts a 10-GHz signal by 1 kHz and which suppresses the carrier and unwanted sideband by 65 dB and >57 dB, respectively, with respect to the wanted sideband, is described. The modulator comprises two commercially available double sideband modulators and a readily constructed high-pass filter. Using the modulator in one arm of a microwave bridge, phase shifts and changes in attenuation of <1° and 0.05 dB have been measured; the low modulating frequency allows audio-frequency circuitry to be used to measure the phase shift and attenuation.

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