Abstracts

Magnetostatic Surface Wave Signal-to-Noise Enhancer

S.N. Stitzer, H. Goldie, J.D. Adam and P.R. Emtage. "Magnetostatic Surface Wave Signal-to-Noise Enhancer." 1980 MTT-S International Microwave Symposium Digest 80.1 (1980 [MWSYM]): 238-240.

Utilizing saturation of magnetostatic surface waves propagating in thin YIG films, the signal-to-noise enhancer (or power expander) performs the opposite function from that of the power limiter; weak signals suffer up to 20 to 30 dB greater attenuation than do strong signals. This discrimination takes place on a frequency selective basis over an instantaneous bandwidth of one-third octave or more. Basic principles, construction methods, and experimental results are discussed.

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