Abstracts

Passive Phase-Distortionless Parametric Limiters

A.E. Siegman and I.T. Ho. "Passive Phase-Distortionless Parametric Limiters." 1961 PGMTT National Symposium Digest 61.1 (1961 [MWSYM]): 17-18.

This paper presents theoretical and experimental results on a type of limiting action occurring in parametric circuits. Let a signal at frequency omega be passed through a resonant tank at this frequency which is coupled by a non-linear element to a resonant tank at the half frequency omega/2. Above a certain threshold, the signal transmission through the omega tank will suddenly and sharply limit, in part because some of its energy goes into subharmonic omega/2 oscillations, in part because the input VSWR to the device increases. This limiting principle can be implemented with varactor diodes or other parametric elements; it also explains the operation of previously known ferrite types of limiters.

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