Abstracts

On Stored Energy and Bandwidth in TEM-Mode Microwave Networks

G.F. Ross. "On Stored Energy and Bandwidth in TEM-Mode Microwave Networks." 1969 Transactions on Microwave Theory and Techniques 17.7 (Jul. 1969 [T-MTT]): 386-395.

From time domain considerations, a method is presented to calculate the energy stored in certain resonant TEM-mode microwave networks. The time average of the stored energy is then used to define an instantaneous signal bandwidth parameter through the definition of a Q or quality factor. It is demonstrated by experiment that the Q factor is inversely proportional to the rise time of the envelope of the step-modulated response of the network at resonance.

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