Abstracts

Analysis of Pulse Dispersion Distortion Along Exponential and Tchebycheff Microstrip Tapers

M. Kobayashi and Y. Nemoto. "Analysis of Pulse Dispersion Distortion Along Exponential and Tchebycheff Microstrip Tapers." 1994 Transactions on Microwave Theory and Techniques 42.5 (May 1994 [T-MTT]): 834-839.

The voltage and current transfer functions are shown for the tapered line. The dispersion distortion obtained by using these transfer functions are shown for the nonideal square pulse along the exponential taper and the Tchebycheff taper. The great and sharp peak in the front of the distorted wave is caused due to the frequency dispersive characteristics of effective relative permittivity. The sustained tail and the ascent of gentle slope in the plateau in the distorted wave are caused due to the multi-reflection in the tapered line and are inherent characteristics in the configuration of taper. The sustained tail starts to vanish after the time of about one and half times of the echo time.

❑ Return to main document.