Abstracts

A Subnanosecond X-Band Pulse Modulator

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Step and impulse waveforms are serving an increasingly important role in modern microwave technology. Historically, radar has been the most important application for abruptly changing waveforms. An important new application is time-domain reflectometry; where abrupt base-band waveforms are used to resolve transmission line discontinuities. Baseband waveforms (those whose spectrum begins essentially at zero frequency) are particularly useful for observing discontinuities in characteristic impedance. When frequency sensitive discontinuities are observed, however, the resolution will depend on the amount of high-frequency energy available in the waveform.

❑ Return to main document.