Abstracts

Observation of Nanosecond Carrier Pulses

K. Miyauchi. "Observation of Nanosecond Carrier Pulses." 1964 Transactions on Microwave Theory and Techniques 12.2 (Mar. 1964 [T-MTT]): 221-230.

The present paper describes theory and experiments on the observation of nanosecond carrier pulses in the microwave region. The advancement of microwave nanosecond techniques requires measurement of waveforms which is more accurate than conventional methods. The measuring method described here was developed to satisfy this requirement. The new method, using a synchronous or heterodyne detector, gives accurate and complete information on nanosecond pulse waveforms in the microwave region. Applying this method, we constructed an experimental system to generate and observe the nanosecond pulses in the 11-Gc region. The over-all rise and fall time and delay resolution of this system are as small as 0.5 nsec. Pulse modulators, detectors and filters were measured or adjusted with this experimental system. The experimental results are described in this paper. The pulse generation and observation system developed here is expected to be useful for measuring and adjusting microwave nanosecond pulse devices with accuracy.

❑ Return to main document.