Abstracts

A 2.3-ps Time-Domain Reflectometer for Millimeter-Wave Network Analysis

R.Y. Yu, M. Kamegawa, M. Case, M. Rodwell and J. Franklin. "A 2.3-ps Time-Domain Reflectometer for Millimeter-Wave Network Analysis." 1991 Microwave and Guided Wave Letters 1.11 (Nov. 1991 [MGWL]): 334-336.

A GaAs monolithic time-domain reflectometer (TDR) for millimeter-wave network analysis has been fabricated. The TDR has two outputs from which the incident and reverse waves can be determined. The two channels show 2.3 ps falltime, hence 150 GHz-3 dB TDR bandwidth. The reflection coefficient in the time domain obtained after a partial calibration clearly indicates a prominent reflection when the TDR is under open-circuit load. With the use of network analysis calibration routines, corrected millimeter-wave vector measurements will be feasible with these devices.

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