

A Systematic Error Analysis of HP8510 Time-Domain Gating Techniques with Experimental Verification

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The errors caused by using time-domain gating techniques on the HP8510 automatic network analyser are investigated systematically. These errors are divided into four categories: out-of-gate attenuation error, truncation error, masking error and multi-reflection aliasing error. A method to estimate the order of the magnitude errors resulting from time-domain gating is presented. Experiments to support the analysis are designed and carried out, giving results in good agreement with theory.

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