

Abstracts

Broadband time-domain characterization of multiple flip-chip interconnects

P. Li, Hui Wu, Tong Li, K. Chin and Wenquan Sui. "Broadband time-domain characterization of multiple flip-chip interconnects." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1891-1894 vol.3.

This paper presents a comprehensive approach for the characterization of multiple flip-chip interconnects by three-dimensional finite-difference time-domain (FDTD) method. The behaviors of transition discontinuities in three coplanar waveguide (CPW) layers and four flip-chip bump interconnects are investigated for optimal packaging performance. The relationship between the reflection loss and the cross-section of bumps is discussed in detail. Results in this paper shows that FDTD is a reliable method to simulate and aid design of complicated package structures.

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