Abstracts

Wideband Characterization of Mutual Coupling Between High Density Bonding Wires

H.-Y. Lee. "Wideband Characterization of Mutual Coupling Between High Density Bonding Wires." 1994 Microwave and Guided Wave Letters 4.8 (Aug. 1994 [MGWL]): 265-267.

Mutual coupling between grounded bonding wires for high density IC packaging has been characterized over a wide frequency range using the Method of Moments in consideration of the ohmic and radiation losses. At high frequencies, the mutual inductance greatly increases due to the radiation-enhanced mutual coupling effect. For 500-μm-long bonding wires, a minimum 200-μm separation is required to maintain a 20-dB crosstalk level at low frequencies. This wideband analysis will be useful for designing packages and interconnection layouts of high frequency IC's with increased packaging density and operating frequency.

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