Abstracts

Analysis of coupling characteristics between transmission lines with a buried meshed-ground in LTCC-MCMs

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Since the manufacturing process does not allow solid ground planes between ceramic layers to isolate the signal lines, the buried ground should be realized as a meshed ground plane. Both characteristic impedances of the signal lines and couplings between different signal layers are influenced by the properties of these meshed planes. In this paper, we propose a new analysis method for coupling behavior between internal transmission lines, which are isolated by the buried meshed-ground planes. The coupling behavior between layers isolated by meshed-ground plane is investigated by the coupled-transmission lines model for the isolated layers. The coupling factors between isolated lines with the meshed-ground are extracted by 2-D FEM calculations.

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