Abstracts

A design of the ceramic chip balun using the multilayer configuration

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This paper presents the design method and performance characteristics of a chip-type balun using a multilayer structure. The design method for a chip-type balun is based on the lumped-element equivalent circuit of quarter-wave transformer. The proposed design method and equivalent circuit can make it easy to design the ceramic multilayer chip-type balun. The size 2012 and 3216 chip-type baluns were designed and fabricated using the proposed design method and the equivalent-circuit model of a quarter-wave transformer. Fabrications and measurements of designed chip-type baluns show smaller size than conventional chip-type baluns and good agreement with simulated results.

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