Abstracts

Millimeter wave H-plane diplexers

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Millimeter wave H-plane diplexers are designed using modified H-plane waveguide T-junctions and modified inductive window bandpass filters. Modeling of the diplexers are performed using full wave mode matching method to obtain the generalized scattering matrices of the building blocks and by cascading procedure to provide the overall frequency response. A complete systematic optimization procedure leads to the desired diplexer design. A millimeter wave K/sub a/ upper band diplexer based on the simulated result was built and tested. Without any tuning, excellent experimental results are obtained, which verified the design approach.

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