Abstract

This paper presents the complete analysis, design of microwave Parallel coupler using synthesis approach and Branch Line Coupler which has been fabricated using FR-4 PCB substrate material and tested in the lab environment successfully. The design of all above components is done using the IE3D simulation tool and tested its S-Parameter results with Vector Network Simulator (VNA). The design parameters with respect to the IE3D structures of the physical dimensions are optimized successfully using Matlab.
- The complete design of microstrip directional couplers using the synthesis method by Abdulla Eroglu. [Ieee transaction on instrumentation and measurements propagation letters, vol. 13, 2014]. Microwave Engineering by David M. Pozar.


**Index Terms**

Computer Science

Circuits And Systems

**Keywords**

Branch Line Coupler (blc); Fr-4 Substrate; Ie3d Tool; Parallel Coupler; Vector Network Simulator (vna)