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Building and Testing Microwave Communication System Components

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FINAL REPORT

EET 491

BUILDING AND TESTING

MICROWAVE

COMMUNICATION

SYSTEM

COMPONENTS

By

Arthur C. Kuehnert

April 18, 1995

Abstract

**BUILDING AND TESTING MICROWAVE
COMMUNICATION SYSTEM COMPONENTS**

By

Arthur C. Kuehnert

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Basic stripline structures, and stripline directional couplers were custom built and tested. These tests were conducted to determine the result, on the output, by changing the dielectric constant of the top ground plane. The components were made to maintain an impedance of approximately 50 ohms. The test equipment was calibrated to a frequency between 6 Ghz to 8 Ghz.

The results show if both top and bottom ground planes have the same dielectric constant the output is better than having a lower dielectric constant for the top ground plane.

This report will provide detailed information on the design of the component, how the variables were changed, how the tests were conducted, the type of test equipment, and the results of each test.

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