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Substrate Integrated Waveguide Technology: Design and Analysis (3-0-0) 3

Unit 1

Introduction: Substrate Integrated Waveguide Technology, SIW Circuits Composed of Metallic Posts, SIW Circuits with Dielectric Posts.

Unit 2

A typical SIW circuit and its equivalent problem, Field expressions, Boundary conditions, Z-matrix, S-matrix Sub-ports combination Modeling of losses.

Unit 3

Even-Odd Mode Analysis of a Symmetrical Circuit, Half circuit with PMC symmetry wall, half circuit with PEC symmetry wall, Microstrip or planar transmission line to SIW Transition and Half Mode SIW.

Unit 4

Substrate Integrated Circuits (SICs) and components, Filters, couplers Mixers, Amplifiers and SIW antennas.

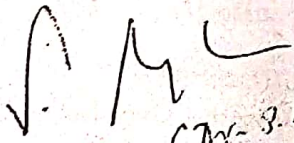
Unit 5

Numerical Technique for SIW analysis: Methods of line.

Reference Books:

Xuan Hui Wu, Ahmed Kishk, Analysis and Design of Substrate Integrated Waveguide Using Efficient 2D Hybrid Method.

P. Arcioni, Roselli, Rogier, A. Georgiadis Microwave and Millimeter Wave Circuits and Systems: Emerging Design, Technologies and Applications, 2nd Edition, Published by John Wiley & Sons


Dr. B. K. S. (Signature)

Submitted to: The Dean (Academic) for ratification
tho senate meeting.