

Unit - 1

- Two port network
- Low freq vs High freq
- Formulation of S parameter for two port network
- Properties of S parameter
- Components at High frequency

Unit - 2

- Three port network
- E plane tee
- H plane tee
- Magic tee
- Waveguides corners, bends and twists
- Directional coupler
- MW isolator
- Circulator

- Attenuators

Unit - 3

- Microwave bipolar transistors
- Heterojunction Bipolar junction transistor
- Metal Semiconductor Field Effect Transistor

- High Electron Mobility Transistors (HEMT)
- Gunn diode
- IMPATT diode

Unit - 4

- Klystron
- Reflex klystron
- Travelling wave tube
- Crossed field tubes
- Magnetron

- Hull cutoff magnetic equation
- Hartree condition
- Characteristics of transmission line
- Microwave testing
- Power measurement

Unit - 5

- T_{in} of a device
- Derivation of stability circles
- Unilateral figure of merit
- Design of an amplifier

