



ECC 203 : Electromagnetics and Radiating Systems

Types of Transmission Lines and Waveguides

Gowrish B.

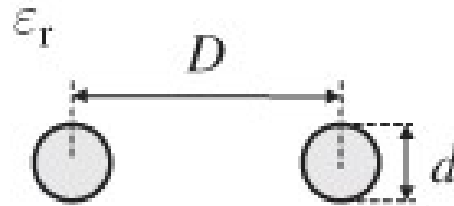
Asst. Professor, ECE Dept., IIT Roorkee

gowrish.b@ece.iitr.ac.in

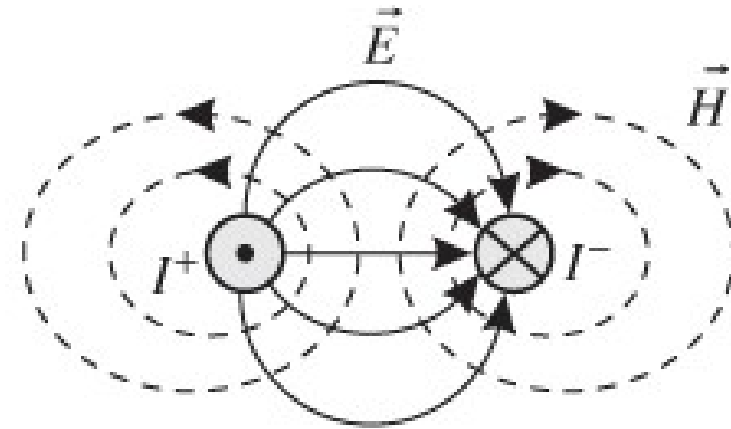
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Two Wire / Parallel Wire Transmission Line



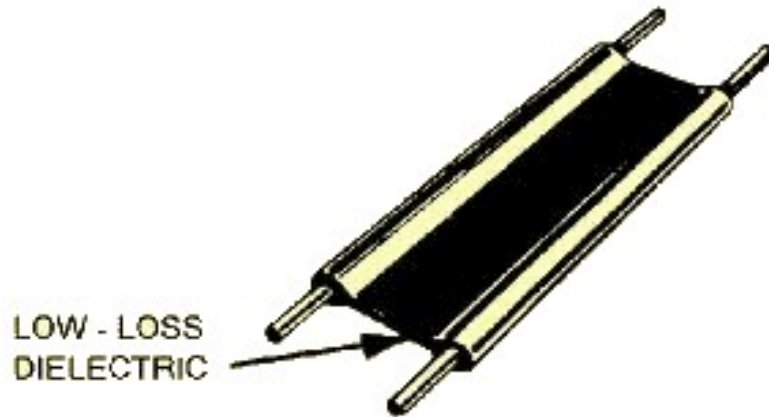
(a)



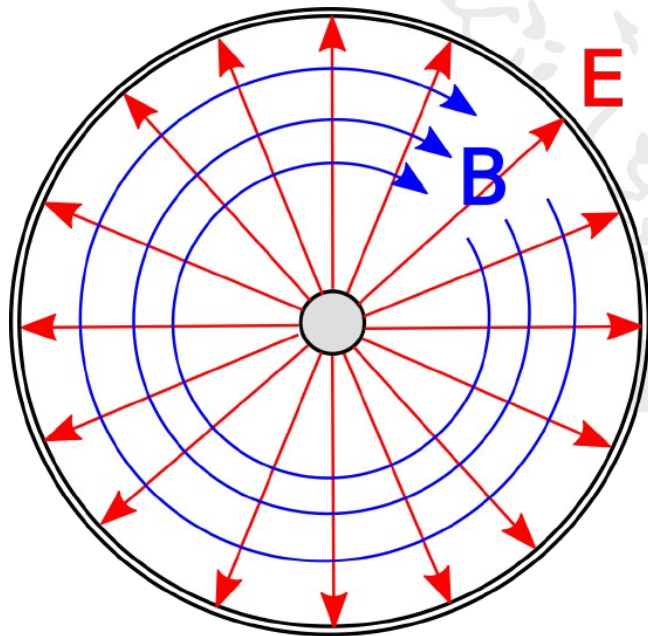
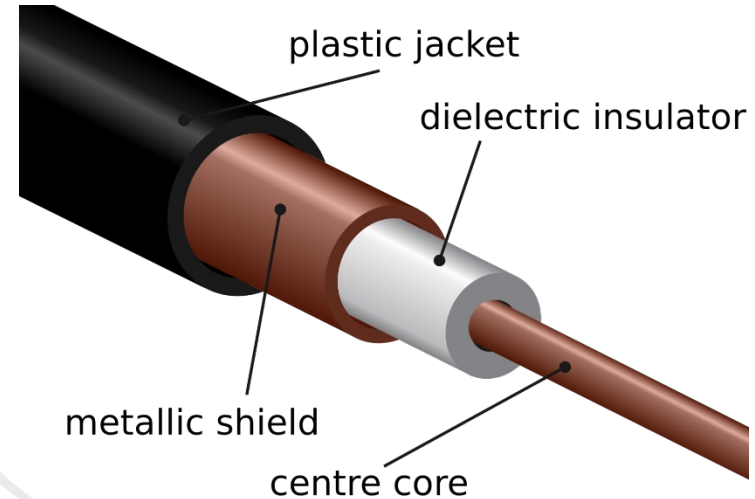
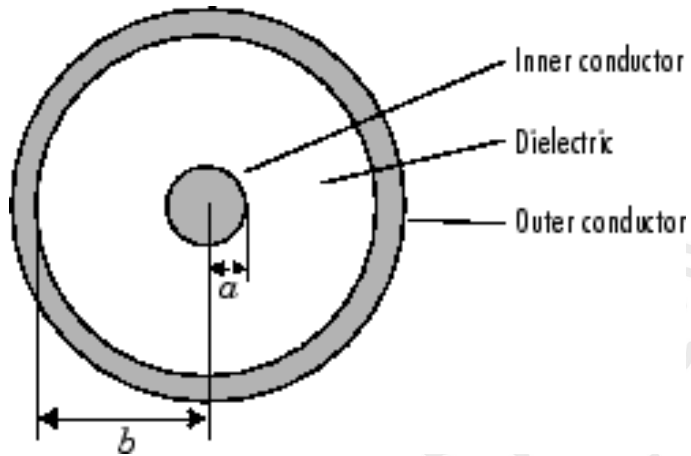
(b)

TV and Telephone Cables : 1990s

What is the limitation?



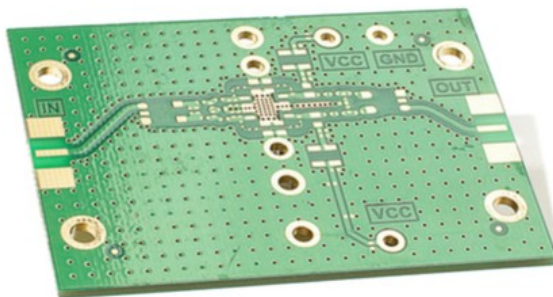
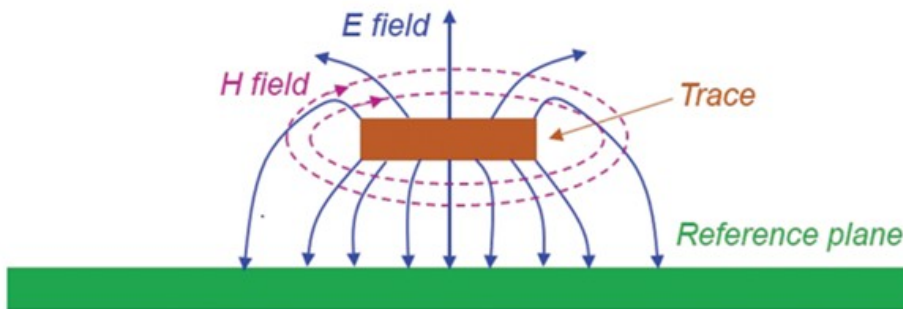
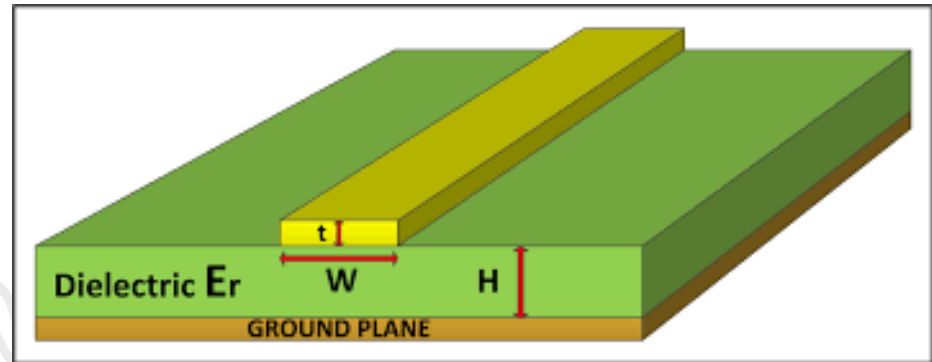
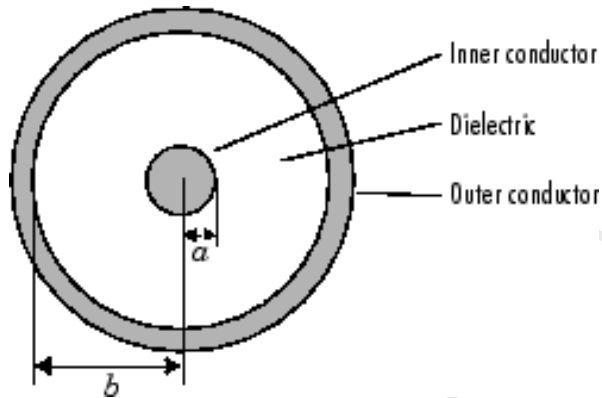
Coaxial Transmission Line



TV and Telephone Cables : early 2000 onwards

What is the limitation for Circuit Design?

Microstrip Transmission Line

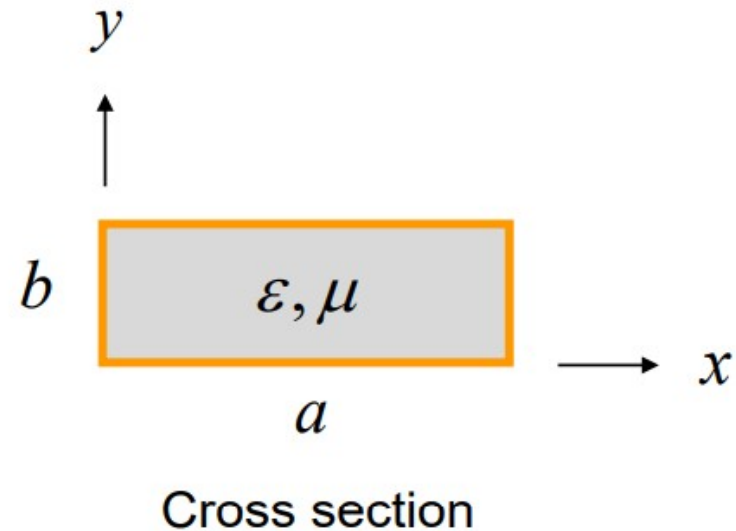
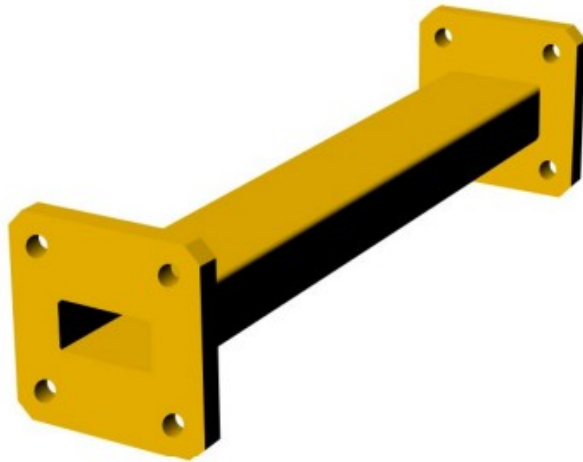


Widely adopted for Microwave Integrated Circuits and Monolithic Microwave Integrated Circuits

What is the limitation?

Rectangular Waveguides

Rectangular Waveguide



- We assume that the boundary is a perfect electric conductor (PEC).

No TEM_z mode can exist!