CHAPTER OVERVIEW

7: TEM Transmission Lines

Transmission lines typically convey electrical signals and power from point to point along arbitrary paths with high efficiency, and can also serve as circuit elements. In most transmission lines, the electric and magnetic fields point purely transverse to the direction of propagation; such waves are called transverse electromagnetic or *TEM waves*, and such transmission lines are called *TEM lines*. The basic character of TEM waves is discussed in Section 7.1, the effects of junctions are introduced in Section 7.2, and the uses and analysis of TEM lines with junctions are treated in Section 7.3. Section 7.4 concludes by discussing TEM lines that are terminated at both ends so as to form resonators.
