

Abstract

Waveguide Network

Conventional technologies using copper tracks to couple integrated circuits (ICs) disposed on printed circuit boards (PCBs) face limitations in scaling beyond a certain transmission rate, restricting their future applications. The present invention describes a waveguide network, in which the network comprises ICs on a PCB coupled via a dielectric waveguide, which advantageously overcomes the problem. The dielectric waveguide is configured for transmission of radio frequency (RF) signals and has a bandwidth of at least 100 GHz, among other features. Further, the network can be arranged as different topology such as ring, star or bus based, and is also couplable to other equivalent networks on the PCB using suitable waveguide-based networking devices.

[Figure 1]

