TRANSMISSION LINE AND METHOD OF DESIGNING SAME

Abstract of the Disclosure

A transmission line has a limited cross-section, a transmission line geometry and an improved characteristic impedance tolerance. The transmission line geometry utilizes a unique combination of broadside coupling and coplanar coupling with a reflector plate in order to improve the tolerance of the characteristic impedance. First, a larger coplanar gap is used to reduce the etching error. Second, the inner dielectric thickness sensitivities were also reduced by relying on broadside coupling and coplanar coupling to determine the characteristic impedance of the transmission line. Third, the effect of registration error in the broadside coupling is eliminated by rendering the two signal bearing conductors on the same layer.

Figure 5 accompanies this abstract.