

Abstract

Hybrid 90 degrees is a four ports devaice that usefull in telecommunication system that needed phase shifter such us mixer, beamformer and parallel amplifier. One function of hybrid 90 degrees is as devider power in port input become two outputs that have a balance magnitude but with 90 degrees difference phase of another.

It can realized consist based on reactif component (lumped element) or distribution lines such us waveguide, microstrip and coaxial lines. Hybrid 90 degrees have been here in market but it is still expensive.

This final project discuss about design and realization of hybrid 90 degrees base on coaxial line that make by materials around us (handmade coaxial lines) that easy to take, such us tissue, and alumunium foil to realize a hybrid that more economic.

Although for measurement that has been realize still there parameter that can't carried out, such VSWR that big, but this final project can be a start point for open research and independent industry in make hybrid 90 degrees.

Keyword: hybrid 90 degrees, coaxial, materials around us