

ABSTRACT

Butterfly electrical dipole unidirectional collinear antenna is axis array of butterfly electrical dipole antenna. Design and realization antenna in this last project consist of five butterfly electrical dipole element that is serial rationed. Antenna is designed in ISM frequency range 2400 MHz-2484 MHz. Radiation pattern of this antenna is unidirectional, butterfly electrical dipole basically have bidirectional radiation pattern, but just added reflector can get unidirectional radiation pattern such as designed. The purpose of serial ration in order that uniform current I.

By definition helping of directivity and gain, will get five element that is needed to get gain ≥ 6 dBi. In order that isn't need balun, strong construction, so the line connection between each element is designed and realization from cooper pipe coaxial and air blocked cooper wire.

To know performance of this antenna is needed a measurement mechanism. The measurement consist of VSWR measurement, bandwith, radiation pattern and antenna gain. From measurement result is got bandwith with VSWR = 1,7 limits 90 MHz, can get gain 10,92 dBi in frequency design.