

ABSTRACT

Omnidirectional hexagonal antenna is the antenna that consist of 6 lines of opened $\frac{\lambda}{4}$ transformer which its input impedance is paralld radially, so it has been pattern as omnidirectonal. The radiation pattern obtained from each line which has a unidirectional radiation pattern, by the total amount of 6 lines produced an omni directional radiation pattern. This antenna designed at the frequency range 1500 MHz – 2500 MHz with one stage binomial matching. This antenna uses a ferit transformer in order to produce a smooth transition.

To deeply know the performance of this antenna it really needs a measuring mechanism. The measuring involving measure the VSWR, frequency bandwidth, antenna gain, radiation pattern, and polarization. From the measuring result that had been done, obtained bandwidth with the limit of $VSWR \leq 1.5$ is 821.33 MHz at the design frequency, gain obtained about 9,127 dBi, the radiation pattern is omni directional, and the polarization approach to linier. The obtained result has fulfill the required specification, except for its bandwidth and polarization which are unappropriate enough from the specification, but it's already categorized in the wide band.