

ABSTRACT

Television is one of the receiving device resources are most often used by people today. The Government has a target migration of analog to digital television in 2018 with the Minister of Communications and Information Technology issued Regulation No.32 of 2013 on the Implementation of Digital Television Broadcasting In Through multiplexing and Broadcasting Terrestrial Systems ^[1]. One of the devices needed to support the implementation of television communication is the antenna.

The receiving antenna operates at a frequency of 470-806 MHz with gain $\geq 2,15$ dBi, bandwidth of 336 MHz, VSWR ≤ 2 , omnidirectional radiation pattern in the horizontal plane and horizontal linear polarization.

The measurement results obtained show that the antenna can work at a frequency of 470-806 MHz. The maximum gain is obtained 5,821 dBi. VSWR at center frequency ($f_c = 638$ MHz) is 1,283 and 466 MHz bandwidth. Omnidirectional radiation pattern in the horizontal plane and horizontal ellipses polarization with axial ratio of 6.07 dB.

Keywords: Digital television, UHF, Cross Dipole, Planar Reflector