ABSTRACT

The development of the telecommunications industry in Indonesia to grow a lot of mobile operators, both GSM and CDMA. To improve the quality of services, all mobile operators are increasing the number of infrastructure such as towers, base stations and others. Construction of the tower that a lot of costly and reduce the beauty of urban planning. To reduce the development of the telecommunications tower, then the government made a rule with the use of tower

In previous work has made a broadband antenna prototype multicula unidirectional and omnidirectional. The antenna is meant to save space and multi-operator. The use of a broadband antenna is one solution to accelerate the implementation of the tower together. This antenna has wide bandwidth so that it can be used jointly by all cellular operators in Indonesia, either GSM or CDMA.

The advantage of using a broadband antenna is used to reduce the number of antennas, one antenna that is enough for all the existing cellular operators in Indonesia today. This can reduce the burden on telecommunications towers. In addition the use of broadband antennas can save the transmission line (feeder). In the GSM cellular system is the value of C / N decreased by 3.38 dB, CDMA value of C / N decreased by 3.5 dB, 3G value of C / N decreased by 3.493 dB. Eb / No on GSM decreased by 7.826 dB, 3.493 dB decline in CDMA and 3G value for Eb / No is also decreased by 5.39 dB.

keyword : Broadband antenna, cellular antenna