

ABSTRACT

Caturcula Antenna Exponential Omnidirectional is coded with **SN.SM0830-CEO-0809**. **SN.SM0830-CEO-0809** is designed to build two (2) purposes. First is to provide a wide band prototype omnidirectional antenna, so that it is able to be used for many telecommunication technology implementations and it can reduce tower burden. The second is to prove from the hypothetical one, namely, Drs. Soetamso that the antenna is, match impedance propagation with the space between radio channels.

Specification that must be met are: frequency of 0.3 GHz-3.0 GHz in the limit of 1.5 maximum VSWR at 50Ω terminal unbalanced, 2.14 dBi minimum gain, omnidirectional, linear polarization, and the antenna is realized with a parallel twin channel strip, based on the transformer exponentially for use in air or vacuum, using a *balun* type monoconic so it will be wideband but without using the coil *toroid*.

Based on the principle twin parallel channel strip, obtained by construction (of the order and the size of each) as follows: length L = dimension = 30cm antenna *cula*, s = space or distance between the strip twin = 3cm, w = strip width = 0.5cm, and construction on the antenna is found a variety of materials and value dielectric as match channels in antenna.

From the results of the test specifications have been done, all concluded that the typical value of specification has been met, except under the VSWR on the frequency of the antenna and polarization. These things because the test is done not in the room without repercussion. Therefore, should the test specifications of antenna performed without echo in the room with the pencil beam antenna test which have polarization linear with the frequency of the antenna in accordance with the test, that is from 0.3 GHz-3.0 GHz.

Keywords: exponential, omnidirectional, twin strip line, monoconic