

Antena susun mikrostrip switched beam pita lebar dengan pencatu hybrid coupler yang menggunakan transformer 1/4 dan STUB

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=132848&lokasi=lokal>

Abstrak

The switched beam antenna is one type of the antennas, which has the ability to choose of radiation pattern with the desired target. It consists of the microstrip antenna array with two elements and the 3 dB hybrid coupler as a beamforming network in the single layer substrate. This paper presents an improvement of the characteristic of a wideband switched beam microstrip antenna array by using transformer 1/4 and the stub at between patch and 3 dB hybrid coupler. A measurement result of the return loss is achieved below to -29 dB at 9.4 GHz; it improves 10 dB better than the antenna without transformer 1/4 and stub. A wideband characteristic achieve up to 2 GHz (921%) at the center frequency (9.4 GHz). The result shows the antenna has 2 orthogonal beams at 20 derajat and 330 derajat.