ABSTRACT

The transition of analog to digital television broadcasts in Indonesia has resulted in areas with low quality signals (blank spots) and unstable signals in some areas due to uneven infrastructure readiness and public acceptance. This affects the satisfaction of television viewers. This project aims to measure the quality of DVB-T2 broadcasts through variations in transmit power (625 watts, 650 watts, and 675 watts) and antenna tilt angle (-10°, -5°, 0°, 5°, and 10°) to improve the quality of the signal received in the planning scheme. Tests were conducted at 26 points (with a distance per 8 km of a 40 km radius) in Kebumen Regency, which is assumed to be an urban area. The performance of digital broadcasting technical parameters showed good results. The average field strength was 58.19 dBμV/m with a power variation of 675 watts and an antenna tilt angle of 5°. The average C/N was 46.826 dB with a power variation of 675 watts and an antenna tilt angle of 0°. The average SNR of 46.350 dB was obtained at a power variation of 675 watts and an antenna tilt angle of 0°. BER of 4.6 × 10-⁴ was achieved at a power variation of 675 watts with an antenna tilt angle of 0°. This result shows a stable signal quality and complies with digital broadcast standards. So it can be seen that the 675 watt variation with an antenna tilt angle of 0° is the best power variation and antenna tilt angle in this project.

***Keywords**: BER, C/N, DVB-T2, field strength, SNR, urban area.*