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FINAL REPORT:
PRINTED DIPOLE ANTENNA FOR 2.45GHz

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ABSTRACT

This final year project proposes the printed dipole antenna. The antenna was design to operate at 2.45GHz for WLAN application using 50 Hz frequency for fabrication; this antenna used FR-4 substrate. This antenna was design and simulated using CST Microwave Environment Software. The performance of the designed antenna was analyzed in term of return loss, VSWR, bandwidth, radiation pattern and gain. The antenna was then fabricated on the substrate type FR-4 and the output was measured using Vector Network Analyzer (VNA) to evaluate its performance measure result in S-parameter (S11), voltage standing wave ratio (VSWR), and bandwidth. The final S-parameter (S11) result for the single element dipole antenna frequency resonant shows at 2.51GHz WLAN with -11.41 dB to match the input resistant, the output of the feed line was accurate at 50 Ω resistant so that it can test at the lab using Vector Network Analyzer (VNA) to measure the network parameter of electrical network. The antenna design, simulate and measured dipole antenna are deliberate within this report.

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