

# A new Triple-band ceramic antenna for WLAN and WIMAX applications

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## ABSTRACT

This thesis proposes a new microstrip-fed ceramic antenna for Wireless Local Area Network (WLAN) and Worldwide Interoperability Microwave Access (WiMAX) applications. The antenna was designed by using a ceramic substrate printed with a T-shaped line, which generates different resonant modes for the desired triple-band operations. Due to higher permittivity of the ceramic substrate, the antenna area can be reduced efficiently. After tuning the antenna by using an EM simulation software, the prototype of the proposed antenna was designed for 2.4/5.8 GHz bands of WLAN and 3.5 GHz band of WiMAX. Effects of varying the ceramic substrate dimensions, the line dimensions, and the nearby metal shields have been discussed.

Keywords : ceramic antenna、 T-shaped antenna、 WLAN、 WIMAX

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