

Theoretical analysis and application of antenna with band notched characteristic

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ABSTRACT

This thesis is focused on suppressing the unwanted band for ultra wideband antenna. The unused band in ultra wideband antenna always caused too much power consumption, and radiated noise to interfere other wireless system. Therefore, it is very important to study the mechanism of suppressing unwanted signal on antenna instead of using filters before/after transmitting/receiving antenna. The main mechanism of this thesis is to put resonators nearby the main current distribution of the antenna. First, we use simulated software to predict the main current distribution in the band that we want to suppress. Then we put the resonator nearby the main current of the antenna. The radiated electromagnetic wave will couple to the resonator and induce opposite current to cancel the radiated field. The final goal of this project is to devise a general mechanism to be fit for any antenna structure rather than do it case by case.

Keywords : Ultra Wide-Band Antenna、 resonator

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