New built-in FM antennas for mobile devices

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ABSTRACT

This thesis proposes a built-in frequency modulation (FM) antenna for mobile devices. It can receive the electromagnetic wave broadcasted by the broadcasting stations, and listen to all the broadcast programs in FM channels. The antenna ’ s size is only 25 * 5 * 1 mm3 (length * width * height). The antenna is realized by using a quarter wavelength monopole antenna, printed windingly on an FR4 substrate. By adjusting the line-width, the line-spacing and the shape, one may make the antenna ’ s resonant frequency accurately conform to the FM ‘ s bandwidth : 88 MHz ~ 108 MHz. The measurement was performed by placing the FM antenna on a FR4 circuit broad. The results of simulation and measurement both show that this antenna has practical and useful characteristics.

Keywords : FM Antenna、Monopole Antenna、Chip Antenna

Table of Contents

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