Abstract

This paper presents designing of capacitive fed and electromagnetic coupled MSA. These are designed to overcome the disadvantage of MSA i.e. narrow bandwidth. The antenna design is simulated using HFSS software. Antenna is designed at frequency of 2.4 GHz. Capacitive fed antenna provides wide bandwidth. Its working frequency range 2.275-2.905GHz with return loss of less than -10 db. Capacitive fed with electromagnetic coupling MSA antenna works on frequency range 1.915-2.83GHz. Hence bandwidth enhancement can be obtained by ECMSA. The proposed antenna designs can be used in WLAN band 2.4 GHz, USB dongle, UTMS & Bluetooth communication.

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**Index Terms**

Computer Science Communications

**Keywords**

Microstrip Patch Antenna (MSA)  Capacitive fed MSA  Electromagnetic coupled MSA (ECMSA)