

Reconfigurable multi-band stacked Microstrip Patch Antenna for wireless applications

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Abstract: A reconfigurable stacked Microstrip Patch Antenna (MSA) of operating frequencies in the range of (2-5) GHz is proposed for wireless applications. The new antenna is composed of two layers, the bottom layer is a patch with two slots designed on each side that can be controlled via switches. By adjusting the status of the switches, the resonance frequencies can be varied, thus achieving frequency reconfigurability. In order to increase the number of resonance frequencies and to enhance the bandwidth of the patch, another patch is placed on top of the first antenna. The two patches are separated with a dielectric layer optimized to yield the maximum number of resonance frequencies, bandwidth and gain.