

## Multiband Multipolarized Planar Antenna for WLAN/WiMAX Applications

**Authors :** Sanjeeva Reddy, D. Vakula

**Abstract :** A single layer, multi-band triangular patch antenna is proposed for WLAN/WiMAX applications with different polarization requirements. This probe feed patch is integrated with arc shaped slit to achieve circular polarized (CP) and linearly polarized (LP) radiation characteristics. The main contribution of antenna is to resonate the frequencies of 2.4 GHz with CP and 3.5 GHz, 5.28 GHz with LP. The design procedure of antenna is described and the performance is validated using measurements. Size of antenna is also reduced and provides stable gain at all resonant frequencies. Proposed structure also provides better enhancement in terms of 10-dB impedance bandwidth, achieved gain of 5.1, 5.6, and 2.9 dBi at respective bands.

**Keywords :** circular polarization, arc shaped slit, multi band antenna, triangular patch antenna, axial ratio

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020