Proximity Fed Shorted 1350 Sectoral Microstrip Antenna

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Abstract

Compact shorted 1350 Sectoral microstrip antenna derived from 2700 Sectoral microstrip antenna is proposed. On thicker air substrate \((h > 0.150)\) it yields bandwidth of more than 350 MHz (35\%). To increase the bandwidth, its rectangular slot cut variation is proposed. The slot reduces the resonance frequency of higher order \(TM_{1/4,1}\) mode of the shorted patch and along with fundamental \(TM_{1/4,0}\) mode, yields bandwidth of more than 500 MHz (>50\%). The realized bandwidth in shorted slot cut Sectoral microstrip antenna is nearly the same as that given by 2700 Sectoral patch, but with 50\% reduction in patch area. Due to shorted patch, proposed antenna gives gain of around 3 dBi over the entire bandwidth.

References

- Bhartia, B. and Bahl, I. J., Microstrip Antennas, USA, 1980
- Deshmukh, Amit A., and Kumar, G., "Compact Broadband U-slot loaded
- Balanis, C. A., Antenna Theory: analysis and design, 2nd edition, John Wiley & Sons Ltd.

Index Terms

Computer Science
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Keywords
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