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 $(h > 0.1\lambda_0)$ 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 TM1/4,1 mode of the shorted patch and along with fundamental TM1/4,0 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
- Balanis, C. A., Antenna Theory: analysis and design, 2nd edition, John Wiley & Sons Ltd.
- Deshmukh, Amit A., Phatak, Neelam V., and Nagarbowdi, S., Broadband Slot cut 2700 Sectoral Microstrip Antenna&quoting; Proceedings of ICACIT – 2014, 18th & 19th December 2014, Mumbai, India

Index Terms

Computer Science
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Keywords

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Higher Order Mode