
Design and Simulation of High Performance Half wave-dipole Antenna for L TE Applications

ENEE5302

October 29, 2016

1 PROBLEM

Based on the half wave dipole antenna shown in Fig. 1. Use HSFF software to :

1. simulate and design calculation of this half wave dipole antenna.
2. Evaluate and Plot the Return Loss.
3. Evaluate and Plot VSWR.
4. Evaluate and Plot the 'Gain' of the antenna.
5. Evaluate and Plot the radiation pattern.

Hent: Use data proposed in [1].

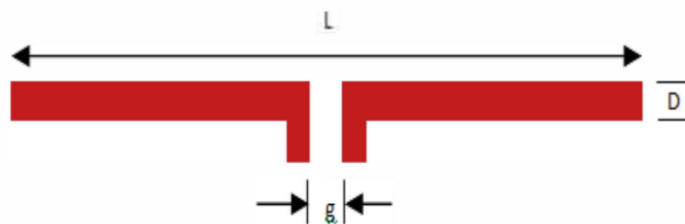


Figure 1: Geometric of Have-wave Dipole Antenna

6. Extend your work to design and simulate high gain and more BW half wave dipole antenna to make this antenna operate within millimeter wave communications for 5G.

Note: final scientific report and presentation should be submitted before January, 10th.

REFERENCES

- [1] A. Osman, A. A. Yassin, B. Ali, H. Ahmed, and S. Noor, "Design and simulation of high performance half wave-dipole antenna for lte applications," in *Computing, Control, Networking, Electronics and Embedded Systems Engineering (ICCNEEE), 2015 International Conference on*, Sept 2015, pp. 472–474.

Good Luck
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