

Fig. 3: Radiation Pattern of Active Patch Antenna (Co-pl.)

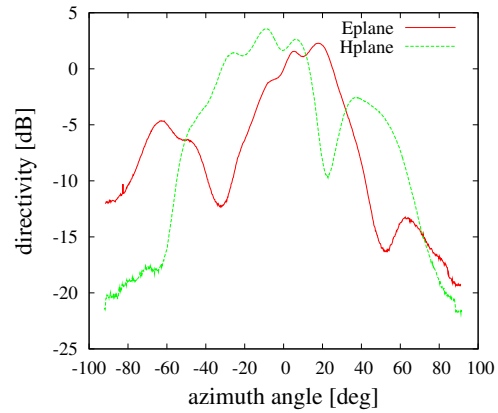


Fig. 5: Radiation Pattern of Active Patch Array Antenna (Co-pl.)

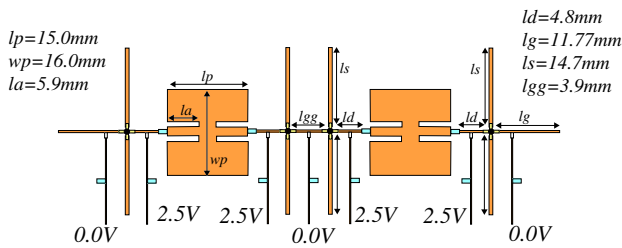


Fig. 4: Configuration of Fabricated 2-Element E-pl Array Active Patch Antenna

5.136GHz with V_{ds} of 2.5V and V_{gs} of 0V. Figure 5 shows the radiation pattern of the two-element array. From this figure, the main beam of the array directed toward to the broadside with the even mode synchronization. The fabricated antenna was operated under the desired mode.

4. CONCLUSION

This paper demonstrates the push-pull active patch antenna. First, the unit cell was fabricated, and measured. The fabricated antenna oscillated at 5.48GHz. The radiation pattern indicates the desired mode operation. Next, two-element array was fabricated. The array oscillated at 5.13GHz. From the radiation pattern the even mode operation under synchronization was indicated. These results are useful to design the electrically steerable high power microwave transmitters using the spatial power combining array.

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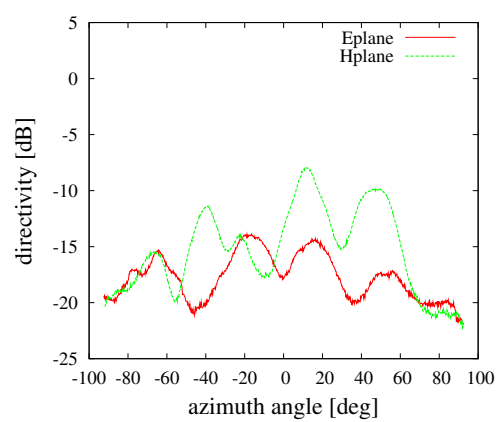


Fig. 6: Radiation Pattern of Active Patch Array Antenna (Cross-pl.)

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