
ACKNOWLEDGEMENTS

First and foremost, I thank from the inner heart of my soul to Lord Almighty, merciful and passionate “Kashi Vishwanath” for providing me this opportunity and granting me the capability to proceed successfully.

This is a magnificent opportunity for me to acknowledge the people without whom it would not have been possible to complete my Ph.D. degree. There would be no any progress without their generous and earnest support.

I consider myself fortunate as a student to have found a supervisor Prof. S. P. Singh. I would like to express my deepest and sincere gratitude to him for providing me the inspiration that led to the completion of this thesis. His extensive experience, immense knowledge, and expertise in the field of Microwaves, have been extremely helpful in solving various technical problems through all phases of this research. Furthermore, his continued support and patience helped me lot to complete my Ph.D. thesis. I am deeply indebted to him for his kindness, patience, constant encouragement and support.

I would also like to thanks, Dr. M. K. Meshram for his valuable suggestions and discussions during the entire research period. I am also grateful to Prof. P. K. Jain for facilitating me with the simulation laboratory and measurement system during the research period. I would like to thanks, Prof. A. K. Ray and Prof. K. P. Singh for their endless suggestions during the research period. I would also like to extend my appreciation to Dr. M. Thottappan and Dr. A. K. Singh for academic guidance and encouragement.

My profound gratitude to Prof. S. Jit, Head, Department of Electronics Engineering, IIT (BHU), Varanasi for providing efficient management and necessary facilities for the success of this work.

I am thankful to Mr. Jayram of microwave lab, for their kind assistance during measurements. I would like to express my gratitude to Dr. B. Jha for their discussions and help for experimental verification of the prototype. I am also thankful to Mr. Ramjee for their kind cooperation to fabricate the horn prototypes.

I would also like to thanks, Mr. Keshav Prasad, Mr. K. K. Srivastava and all office staff for their help in all the way.

I would like to thanks a person Mr. Bhagirath Sahu who helped me a lot selflessly and company during the most crucial phase of my thesis work. He is always a source of inspiration for me. I especially thanks, Dr. Hari Shankar Singh for his kind help and support during the research period. My particular thanks to Dr. Gaurav Kumar Pandey for his help during the measurement.

I have a deep sense of appreciation for Dr. Madan Singh Chauhan, Mr. Veer Singh Gangwar, Dr. Ravi Kumar Gangwar, Dr. Pradutt Kumar Bharti, Mr. Rajesh Singh, Mr. Kranti Kumar Katare, Mr. Mayank Agarwal, Mr. Ashis Kumar Behera, Mr. Abhijeet Singh, Mr. Sachin Kalariya, Mr. Rahul Agarwal, Ms. M. V. Swati, Mr. Siva and Dr. Divya Somvanshi. I extend my thanks to Mr. Kalyan Vaddagiri for his help in CST simulations. Further, I would like to extend my gratitude to my friend Ms. Gargi Dixit and Ms. Prachi Jhanwar for the association and friendship.

Most of all, I would like to extend my ultimate sense of respect to my father Mr. Ajay Kumar Singh and mother Mrs. Maya Singh who are the backbone and origin of my contentment. Their love and affection, blessing, and moral support without complaint or regret have enabled me to complete the work. I would also like to thanks, Nanaji (Ghanshyam Mall) for their suggestions and blessings. I would like to thanks my Chacha (Mr. Rabindra Kumar Singh) and Chachi (Mrs. Shashi Prabha Singh) for their love and blessings. I especially thank my Chachi who cared me without complaint or regret and make me blissful during the entire research period. I would also like to thanks my Chacha (Mr. Rajendra Kumar Singh), Chachi (Mrs. Meena Singh) and Mausaji (Mr. U. P. Singh) for their love and encouragement. I extend my gratitude to my younger brothers and sister: Prince, Himanshu, Aditya, Aman, Sunny, and Bulbul for their associations.

Soni Singh