ACKNOWLEDGEMENT

It is my great privilege to express my deep sense of gratitude and profound thanks to my guide Dr. J. Kanakaraj, Associate Professor, Department of Electrical and Electronics Engineering, PSG College of Technology, Coimbatore, for his invaluable, thought provoking, extraordinary and patient guidance. He was a constant source of knowledge and inspiration during my work. Because of his practical approach and helping attitude, it was a pleasure to work with him. I am forever indebted to him for his research guidance, His suggestions and encouragement especially during difficult times, which really boosted my confidence level.

I am very much thankful to my doctoral committee members Dr. K Gunavathi, Professor, Department of Electronics & Communication Engineering, PSG College of Technology, Coimbatore, and Dr. R. Joseph Xavier, Principal, Sri Ramakrishna Institute of Technology, Coimbatore, for their valuable suggestions during the course of my work. My sincere thanks to Dr. P. Navaneethan, Professor and Head, Department of Electrical and Electronics Engineering, PSG College of Technology, Coimbatore, and the academic section for their help rendered to me.

KATHIRAVAN S