

## CERTIFICATE

It is certified that the work contained in the thesis titled **Integration of switched impedance network in Ultra Sparse Matrix Converter for enhanced operating range** by **M Raghuram** has been carried out under my supervision and that this work has not been submitted elsewhere for a degree. It is further certified that the student has fulfilled all the requirements of Comprehensive Examination, Candidacy and SOTA for the award of Ph.D. Degree.

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