Modelling Full-Bridge Resonant Inverter with Zero Current Switching

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Abstract

This paper presents two models for a full-bridge resonant inverter. The H-bridge operates at the resonant frequency of the R-L-C load connected to it using Zero Current Switching (ZCS) technique. The mathematical equations of the inverter with R-L-C load are described. A Matlab model was implemented to solve the equations and to represent the current and voltage across the output capacitor. A PSpice model was also created to validate the results.