Abstract

This paper presents the comparative study of various Multicarrier Pulse Width Modulation techniques with Sinusoidal reference for single phase seven level cascaded Z-source inverter designed with three intermediate Z-source networks connected between the input source inverter circuit. The cascaded Z-source based MLI technique enhances the fundamental output voltage and reduces the Total Harmonic Distortion (THD). Performance factors such as %THD, Vrms and CF of output voltage are measured for different modulation indices 0.6-1. The results are compared. The simulation results indicate that the use of Z-Source in CMLI boost 50% of the total output voltage. APOD PWM technique provides low THD and COPWM provides high DC bus utilization.
International Conference on emerging trends in Electrical and computer Technology.

Index Terms

Computer Science
Power Electronics
Keywords
Modulation Index (ma) PD POD APOD VF COPWM Z-source Inverter