

A Comparative Analysis of Multicarrier SPWM Strategies for Five-Level Flying Capacitor Inverter

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Abstract : Carrier-based methods have been used widely for switching of multilevel inverters due to their simplicity, flexibility and reduced computational requirements compared to space vector modulation (SVM). This paper focuses on Multicarrier Sinusoidal Pulse Width Modulation (MCSPWM) strategy for the three phase Five-Level Flying Capacitor Inverter (5LFCI). The inverter is simulated for Induction Motor (IM) load and Total Harmonic Distortion (THD) for output waveforms is observed for different controlling schemes.

Keywords : flying capacitor inverter, multicarrier sinusoidal pulse width modulation, space vector modulation, total harmonic distortion, induction motor

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