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| **Title:** | Analysis of Three Level PWM for Two-Phase Voltage Source Inverters | | |
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| **Abstract:** |  |
| Abstract— Three level PWM scheme offer good harmonic spectrum, more output voltage and less switching losses as compared to two-level PWM strategy. For inverters driving resistive loads, the three-level PWM gives better performance than two-level PWM. But, for inductive loads, due to lack of zero voltage freewheeling path, the load current waveform distorts and contain unwanted low order harmonics. Analysis of inverter performance with three-level PWM driving inductive load has not been investigated so far. In this paper the performance of a two-phase inverter driving a two-phase induction motor is investigated with three-level PWM technique. The performance of the three-level PWM scheme is simulated with a theoretical model using regular sampling strategy. The scheme is experimentally implemented with a TMS320C50 digital signal processor board and a 0.5 HP two-phase induction motor is used as the load of the two-phase inverter. The experimental performance is found in good agreement with the theoretical results and hence validates the theoretical model of three-level PWM. | |