Abstract

In this paper, the performance of switching signal generation techniques for three phases shunt active power filter (SAPF) are compared for steady state load condition. The techniques which are considered for comparative study are (i) Hysteresis Current Control (HCC), & (ii) Space Vector Pulse Width Modulation (SVPWM) technique. Performance analyze of above two switching signal generation techniques based on %THD, Complexity, Speed of response, Switching frequency and Delay time in MATLAB/SIMULINK environment. After simulation, we
can analyze the different results on above two methods based on given parameters of SAPF. The %THD of supply current reduces as per IEEE Standard. HCC is simple in implementation over the SVPWM technique. The speed of response of Hysteresis controllers is fast. The switching frequency of HCC is variable but the SVPWM technique operates fixed switching frequency. The delay time is required for SVPWM technique.

References


Index Terms

Computer Science

Circuits And Systems
Keywords
Shunt Active Power Filter (sapf)  Hysteresis Current Controller (hcc)  Space Vector Pulse Width Modulation (svpwm)

%thd

Switching Frequency