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| **1.** | **Authors:** | **First Author Name, Second Author Name, Third Author Name** | | |
| **Paper Title:** | **Paper Title Name** | | |
| **Abstract:** Nowadays, the usage of non-linear loads in power system is more sufficient. For example, UPS, inverters, converters, etc. These loads make the supply current as non-sinusoidal and distorted form, which is called harmonics. At this time Active power filters have been developed to improve power quality. In this Paper, a Shunt Active Power Filter (SAPF) control scheme has proposed to eliminate the current harmonics and improve the power quality. The shunt active power filter controlled by using the different controllers such as (PI, PID, Fuzzy logic, Pq Theory and hysteresis controller). In our proposed system, Hysteresis controller and Instantaneous power theory were used to reduce the harmonics current using the shunt active power filter. And both controllers’ results are compared, and then find which controller is most suitable to control the shunt active power filter in term of total harmonic reduction. MATLAB/SIMULINK power system toolbox is used to simulate the proposed system.  **Keywords:** Power Quality, Shunt Active Power Filter (SAPF), Hysteresis Current Controller, Harmonics, MATLAB/Simulink.  **References:**   1. Qian Liu, Li Peng, Yong Kang, Shiying Tang, Deliang Wu, and Yu Qi “A Novel Design and Optimization Method of anLCL Filter for a Shunt Active Power Filter” IEEE Transactions on industrial electronics, vol. 61, No. 8, pp:4000-4010,august 2014. 2. Anand Singh, Dr. Prashant Baredar,“Power Quality Analysis of Shunt Active Power Filter Based On Renewable Energy Source” IEEE International Conference on Advances in Engineering & Technology Research (ICAETR - 2014). 3. Jeevananthan.K.S, “Designing of Single Phase Shunt Active Filter Using Instantaneous Power Theory” International journel on Electric Engineering & Research ,Vol. 2, Issue 2, pp: (1-10), Month: April - June 2014. 4. Quoc-Nam Trinh and Hong-Hee Lee, Senior Member, IEEE “An Advanced Current Control Strategy for Three-Phase Shunt Active Power Filters” IEEE Transactions on industrial electronics, vol. 60, no. 12,pp:5400-5411 December 2013. 5. H. Sasaki and T. Machida, "A New Method to Eliminate AC Harmonic by Magnetic Compensation Consideration on Basic Design," IEEE Trans. on Power Apparatus and Syst., vol. 90, no. 5, pp. 2009-2019. 6. H. Akagi, Y. Kanazawa, K. Fujita And A. Nabae “Generalized Theory of Instantaneous Reactive Power and Its Application” Electrical Engineering in Japan, Vol. 103, No. 4 *,* 1983 7. H. Akagi “Control Strategy and Site Selection of a Shunt Active Filter for Damping of Harmonic propagation in Power Distribution Systems” IEEE Transactions on Power Delivery, Vol. 12, No 1, 1997 8. T. Narongrit, K-L. Areerak and K-N. Areerak “The Comparison Study of Current Control Techniques for Active Power Filters” 2011 9. H. Akagi “New Trends in Active Filter for Power Conditioing” IEEE Transactions On Industry Applications, Vol 32, No 6, 1996 10. H. Akagi, E. H. Watanabe, M. Aredes “Instantaneous Power Theory and Application to Power Conditioning” IEEE Press, 2007. | | | **1-3** |
| **2.** | **Authors:** | | **First Author Name, Second Author Name, Third Author Name** | |
| **Paper Title:** | | **Paper Title Name** | |
| **Abstract:** This paper presents the study of the effects of shorting posts for C-shaped and H-shaped microstrip patch antennas for GPS application. A C-shaped patch and H-shaped patch loadedmicrostrip patch antenna for GPS frequency (1.575 GHz) are designed and simulated. The shorted microstrip patch antenna is a compact antenna but it suffers from the disadvantage that more number of shorting pins is required thereby making fabrication process harder especially when manufactured in larger quantities. An alternate way to reduce the resonance frequency of the microstrip antenna is to increase the path length of the surface by cutting slots in the radiating patch. The slot is taken as the capacitive reactance in the patch.  **Keywords:** Slot-Loaded Patch, Microstrip Patch Antenna, Global Positioning Satellite (GPS), Shorted.  **References:**   1. W.C. Liu and P.C. Kao, “Design of a probe-fed H-shaped microstrip antenna for circular polarization”, Journal of Electromagnetic Waves and Applications, vol. 21, pp. 857-864, 2007. 2. R. Porath, “Theory of miniaturized shorting-post micro-strip antennas,” IEEE Transactions, Antennas and Propagation, Vol. 48, No. 1, pp. 41-47, 2000. 3. R. Garg, P. Bhartia, I. Bahl, and A. Ittipiboon, “Micro-strip antenna design handbook,” Artech House: London, 2001. 4. M. Sanad, “Effect of the shorting posts on short circuit microstrip antennas,” Proceedings, IEEE Antennas and Propagation Society International Symposium, pp. 794- 797, 1994. 5. H. K. Kan and R. Waterhouse, “Size reduction technique for shorted patches,” Electronics Letters, Vol. 35, pp. 948-949, 1999. 6. Abdel Fattah Sheta and Samir F. Mahrnoud, “A novel H-shaped patch antenna,” Microwave Opt Technol Lett, vol. 31, pp. 62-65, 2001. 7. B. Davor, R. Bojan, “Small H-shaped shorted patch antennas,” Radio engineering, vol. 17, pp. 77, 2008. 8. A.A. Deshmukh, G. Kumar, “Compact Broadband C-shaped Stacked Microstrip Antennas”, IEEE Antenna and Propagation Society International Symposium, Vol.2, pp. 538-541, 2002. 9. Mohammad Tariqul Islam, Mohammed Nazbus, Shakib, Norbahiah Misran, Baharudin Yatim, “Analysis of Broadband Microstrip Patch Antenna,” Proc. IEEE, pp. 758-761, 2008. 10. C.A. Balanis, Modern Antenna Handbook, John Wiley & Sons, 2008. | | | **4-8** |

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