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Electrical Power Quality in the Data Center Building, Faculty of  
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## ABSTRACT

*The Data Center Building of the Faculty of Engineering, Siliwangi University is a very vital building at the Faculty of Engineering which is the administrative center of both students and educators, in which there are a lot of non-linear loads can cause harmonic and there are additional loads beyond the initial planning.. In this Final Project will discuss the quality of electrical power contained in the data center building and recommendations for improving the quality of electrical power. Measurements are carried out for one month with data collection during operation, namely Monday-Friday every 07:00-17:00 after that simulating repairs with the simulink application. In the data center building, there are harmonics of the current average to 25.% for current and 1.99% for voltage Where when compared to IEEE 519-2014 standards for 8% current and 8% voltage so it is not up to standard For current harmonics. The load imbalance reaches 48% where compared to IEEE 1159-2009 standards 5-20% so it is not up to standard. The lowest power factor reaches 0.50 so it has not reached the standard of 0.85, simulating the correction of load imbalance and harmonics, load imbalance in simulation When balanced reaches 1.3% so that it is according to the standard, then simulating harmonic filters Where the initial THD reaches 41% When filtered with filters Passive single tuned harmonics can decrease by up to 3% so that they are up to standard.*

**Keywords** : *Power Quality, Harmonics, Load Incompatibility, Losses, Single tuned Harmonic Filter.*