

### ***ABSTRACT***

Electronic Devices resistance against electromagnetic waves is one of the most important problems for electronics industry. Many imported electronic products such as power supply does not meets the standardization, such as harmonic interference standardization. In order to minimize harmonic interference, the power supply must have a high Power Factor value and meets Harmonic Standardization.

Harmonic disturbance is one of the fundamental problems on Electromagnetic Compability (EMC), electromagnetic waves can occur internally or externally. This factor can threaten the safety of the operator and electronic components as it can cause explosions. Therefore, there must be an EMC standardization applied to every power supply to ensure the device will not cause any harm to user on daily usage.

In this research, designed power supply implements flyback converter and Power Factor Correction (PFC) controller in order to minimize Total Harmonic Distortion to less than 5%. This power supply produce 5 Volt, 2 Ampere output, and 3% Total Harmonic Distortion value.

**Keywords :** *Total Harmonic Distortion, converter flyback, Power Factor Correction*