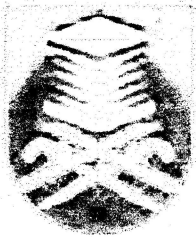


**POWER FACTOR CORRECTION USING
BOOST CONVERTER TECHNIQUE**

Thesis is present in partial fulfilment for the award of
Bachelor of Engineering (Hons) Electrical
University Technology Mara



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ABSTRACT

This project describes a single phase rectifier with improved power factor by using the boost converter technique. Low Power Factor (PF) is caused by non-linearity of the input current. An active power factor correction method was designed for improvement of the power factor. Boost converter is one method of re-shaping the input waveform to be same pattern with the sinusoidal input voltage. The boost converter acts as a Power Factor Correction (PFC) of the input circuit. The design was developed and tested by using PowerSim (PSIM) simulation software. The PF and THD were measured and analyzed for three different situation namely without PFC, with passive PFC and active PFC. Significant percentage of reduction for the THD and percentage of improvement for power factor is achieved by active PFC.

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