

A soft-switching two-switch resonant power factor correction (PFC) converter is presented. In this converter, a boost PFC circuit is integrated with a soft-switching resonant converter. High power factor is achieved by the boost PFC circuit. The voltage across the main switches is confined to the dc-link voltage and the energy of the transformer leakage inductance is also recycled. Soft-switching operation of main switches and output diodes is achieved with a resonant manner and the switching losses are significantly reduced. Therefore, the overall efficiency is improved. The presented theoretical analysis is verified by a prototype of a 48 V, 60 W converter.