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| **Title:** | A CRITICAL REVIEW ON OPEN LOOP ANALYSIS OF SINGLE-PHASE NON-ISOLATED AC-DC BUCK CONVERTERS | | |
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| **Abstract:** |  |
| Abstract— In this paper, we have reviewed a family of power electronic single-phase, non-isolated ac-dc buck converters based on the open-loop analysis. From the literature survey, we have found numerous types of ac-dc buck converter topologies. Among these, a few important topologies are discussed and compared with various parameters like voltage gain, efficiency, switching frequency, total harmonic distortion, and the number of component counts. The comparison shows that the Input switched buck converter maintains an impressive power factor of 0.97 under frequency variation. In terms of the Total Harmonic Distortion (THD) of input current, both the input switched buck  converter and switched capacitor buck converter provide much fewer values of THD than the conventional buck converter over the variation of duty cycle and frequency. | |