

Bridgeless Boost Power Factor Correction Rectifier with Hold-Up Time Extension Circuit

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Abstract : A bridgeless boost (BLB) power factor correction (PFC) rectifier with hold-up time extension circuit is proposed in this paper. A full bridge rectifier is widely used in the front end of the ac/dc converter. Since the shortcomings of the full bridge rectifier, the bridgeless rectifier is developed. A BLB rectifier topology is utilized with the hold-up time extension circuit. Unlike the traditional hold-up time extension circuit, the proposed extension scheme uses fewer active switches to achieve a longer hold-up time. Simulation results are presented to verify the converter performance.

Keywords : bridgeless boost (BLB), boost converter, power factor correction (PFC), hold-up time

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