Inductive Charging Circuit for Operational Power

Description

- Inductive charging circuit to provide average bias current to the BP terminal and operational power for a power converter controller
- Filters a switching voltage generated by the power converter
- Limits peak current provided to the controller
- Current into a capacitor on the BP terminal can be derived from a switching voltage on a winding, such as an output winding of an energy transfer element of the power converter

Benefits

- Reduction in losses from charging the bypass capacitor
- Limits peak of the charging current due to the inductor, RMS value of the charging current is also reduced, which also reduces losses
- Reduction in thermals
- Could be used with: controllers for power converters

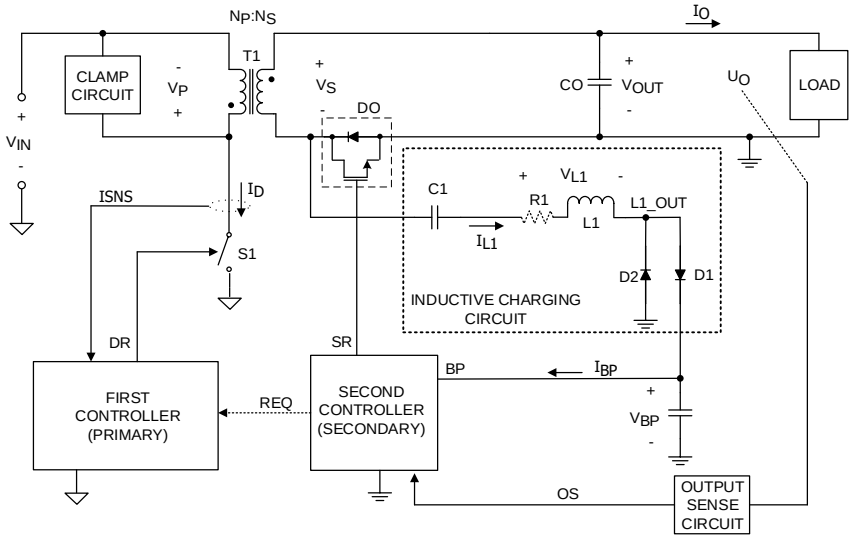

Figure 1. Inductive charging circuit (C1, L1, D1) for providing operational power to a secondary controller from the switching voltage of an output winding, the power converter utilizes a synchronous rectifier and capacitor C1 is a dc blocking capacitor

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