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High Power Density Power Electronics

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Message from the Guest Editors

With the application of wide bandgap semiconductors, the switching frequency and power density of power electronic converters are expected to be greatly improved. However, at the same time, the influence of parasitic parameters in the circuit is more significant, and the optimization of the switching process becomes more complicated; the magnetic components such as inductors and transformers in the circuit become the bottleneck to improving the efficiency and power density of the converter, and new designs are required to meet the requirements. Higher power density also requires higher conversion efficiency and heat dissipation capability, so high-frequency soft switching technology and advanced thermal management technology are particularly important.

In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Integration technology of wide bandgap devices;
- Integrated current sensing, protection, and control;
- High frequency soft switching techniques;
- High power density magnetic devices;
- Advanced thermal management;
- New topologies and applications.





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Message from the Editor-in-Chief

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