

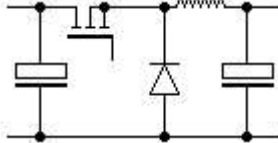
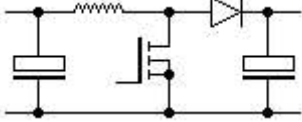
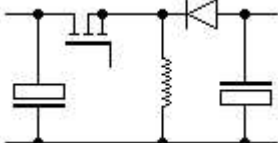
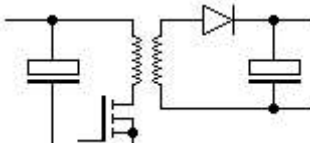
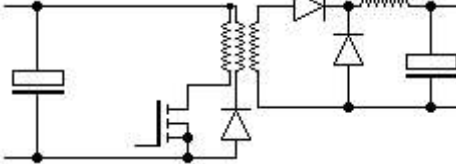
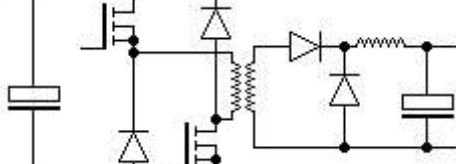


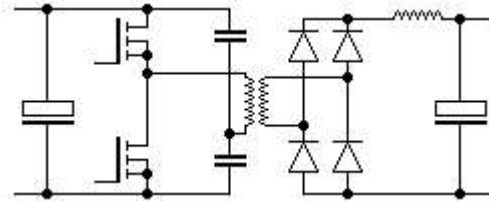
# Design of Switch Mode Power Supplies

[Switch Mode Power Supplies](#) | [Copyrights](#) | [What is that everything?](#)

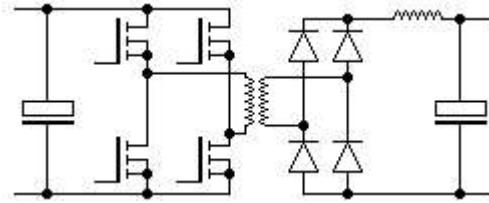
The following programs calculate the relevant currents and voltages for various switch mode power supplies and display these graphically.

Furthermore the programs give suggestions for appropriate choking coils and high frequency transformers.

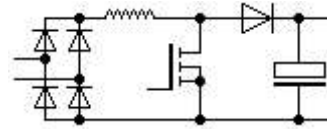
Description	Type of power supply	Help	
The input voltage is converted into a lower output voltage.	<a href="#">Buck Converter</a>	<a href="#">Help with the Buck/Step-down Converter</a>	
The input voltage is converted into a higher output voltage.	<a href="#">Boost converter</a>	<a href="#">Help for the Boost converter</a>	
The input voltage is converted into a negative voltage.	<a href="#">Buck-Boost converter</a>	<a href="#">Help for the Buck-Boost</a>	
Several isolated output voltages, up to approx. 250 are possible.	<a href="#">Flyback converter</a>	<a href="#">Help for the Flyback converter</a>	
One electrically isolated voltage, up to approx. 100 Watts.	<a href="#">Single Transistor Forward converter</a>	<a href="#">Help for the Single Transistor Forward converter</a>	
One electrically isolated voltage, up to approx. 1 KW.	<a href="#">Two-Transistor Forward converter</a>	<a href="#">Help for the Two-Transistor Forward Converter</a>	
One electrically isolated voltage, up to few KW.	<a href="#">Half-Bridge Push-Pull Converter</a>	<a href="#">Help for the Half-Bridge</a>	

[Push-Pull Converter](#)

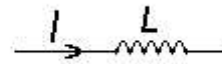
One electrically isolated voltage, up to many KW.

[Full-Bridge Push-Pull converter](#)[Help for the Full-Bridge Push-Pull converter](#)

Switch mode power supply for sinusoidal mains current.

[Power Factor Pre-regulator \(PFC\)](#)[Help for the Power Factor Pre-regulator](#)

Calculation of a inductor L for a max. current I.

[Inductor calculation](#)[Help with the Inductor calculation](#)

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## Note!



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## What is that everything?

**Primarily this Website was written for people who know the basics of switchmode power supplies. We did not consider the control of the transistors, as well as certain preventive measures (discharge sets, current limitings).**

The suggestions for the ferrite cores are approximations based on the manufacturer tables as well as the books Hirschmann/Hauenstein: Schaltnetzteile [1] and Keith Billings: Switch Mode Power Supply Handbook [2]. Check in any case the specification given by us with the appropriate data sheets.

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This Website is optimized for:



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Updated on 12/17/2001



By [Dr. Heinz Schmidt-Walter](#) , [Holger Wenzel](#), Thomas Zänker, Richard Morgan and Johnalan Kegan.