

Complex Power Supply Video List from Youtube 2015

Greg Moore

(Isolated) transformer $AC \rightarrow AC$ (with electrical isolation)

with center tap with various taps with various windings

13:14 / 18:37

SMPS Tutorial (1): Introduction - Switched Mode Power Supplies and Power Conversion

The Post Apocalyptic Inventor

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This guy, the Post Apocalyptic Inventor, has a good series of 5 videos which are worthy of spending the time to view.

2:54 / 19:07

SMPS Tutorial (2): Linear Regulators, Voltage References, Switched Mode Power Supplies

The Post Apocalyptic Inventor

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The Buck Converter

$\bar{V}_o = V_i \cdot D$ Duty Cycle $D = \frac{T_{ON}}{T_{ON} + T_{OFF}}$

16:32 / 22:02

SMPS Tutorial (3): Charge Pumps, Buck Converters, Switched Mode Power Supplies

The Post Apocalyptic Inventor

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We watched this in class, please review this, it's very good for the content we need to know.

without isolation

DC → DC (SMPS)

Inductive Components

Boost Converter

With isolation

Flyback Converter

Forward Converter

Correct Transformer Polarity

SMPS Tutorial (4): Boost Converters, Flyback Voltages, Switched Mode Power Supplies

The Post Apocalyptic Inventor

56,398

54,326

We watched this in class, please review this, it's very good for the content we need to know.

Orrsted's Experiment (continued)

Switch

(Load And Battery)

$P = 50W$

$V = 20V$

(Align to lamp)

A

SMPS Tutorial (5): Inductor Basics, Magnetic Circuits, Switched Mode Power Supplies

The Post Apocalyptic Inventor

50,415

74,678

Fail :)

Switch Mode Power Supply / Regulator (Tutorial with basic example) - Ec-Projects

EcProjects

11,300

41,590

In this video I'm going to teach you about schottky diodes. They are very similar to

www.afrotechmods.com

What is a schottky diode?

Afrotechmods

Subscribed 186,566

121,444

3,291

23

The Boost Converter

Duty Cycle: $D = \frac{V_{out}}{V_{in} + V_{out}}$

Output Voltage: $V_o = \frac{V_i}{1-D}$

A snapshot of the boost converter from the tutorial 4 of the 5 part series.