

Application Note AN-6008

FAN4810 Design Tools

Background/Overview

To simplify designs using the FAN4810 PFC control IC, Fairchild provides:

- A complete FAN4810 Power Factor Correction Controller datasheet.
<http://www.fairchildsemi.com/ds/FA/FAN4810.pdf>
- Application Note AN-6004, that offers theoretical guidelines for calculation Power and Control components of PFC preregulator.
<http://www.fairchildsemi.com/an/AN/AN-6004.pdf>
- An Excel workbook to calculate recommended converter component values, based on 500W preregulator.
<http://www.fairchildsemi.com/products/analog/fan4810designtools.xls>
- A User Guide describing 500W evaluation board based on FAN4810 controller: safety precautions, BOM, electrical schematics and performance data.
<http://www.fairchildsemi.com/collateral/fan4810eval.pdf>
- You can view PCB in the PDF format.
http://www.fairchildsemi.com/collateral/fan4810_Rev2_PCB.pdf
- Gerber files of FAN4810 evaluation board PCB.
http://www.fairchildsemi.com/collateral/fan4810_Rev2.zip
- A boost choke datasheet.
http://www.fairchildsemi.com/collateral/fan4810_Choke.pdf
- Fully functional FAN4810 Evaluation Board.

Additional information about PFC products offered by Fairchild Semiconductor can be found on:

http://www.fairchildsemi.com/whats_new/pfc.html

Recommended Design Procedure

1. Use AN-6004 to understand the theory for selecting power train and control components of a pre-regulator based on the FAN4810.
2. Use the “Input Specifications” worksheet to enter system specification data.
3. Use the “Power-Stage PFC design” worksheet to calculate and select the power train components’ values.
4. Use the “Control Section PFC design” worksheet to calculate and select the control components’ values.

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