

eLab™ Design Tools



Quick, Easy, Always Available

FREE



Texas Instruments

Analog eLAB™

Design Center

www.ti.com/analogelab

1Q 2011

Analog eLab™ Design Center

www.ti.com/elab

At every stage of your design – from concept to production – TI's Analog eLab Design Center can make your job easier.



Learn: **Free** access to webcasts, seminars, conferences, and workshops where TI experts help you solve real-world analog problems.



Select: **Free** search tools provide guided approaches to quickly choose parts for your design.



Design: **Free** reference designs, calculation utilities, design tools, and TI Pro Series software tools.



Simulate: **Free** TINA-TI™ software schematic editor and SPICE simulator for mixed-signal circuit analysis and fast power simulation.



Sample: Order **Free** samples that ship within 24 hours.

Power Quick Search

Power Quick Search ?

***Either Nominal OR both Min and Max is Required**

Input

*Nominal Vin
☒ (V)

OR

*Min Vin (V) *Max Vin (V)

Output 1

Vout (V) Iout (A)

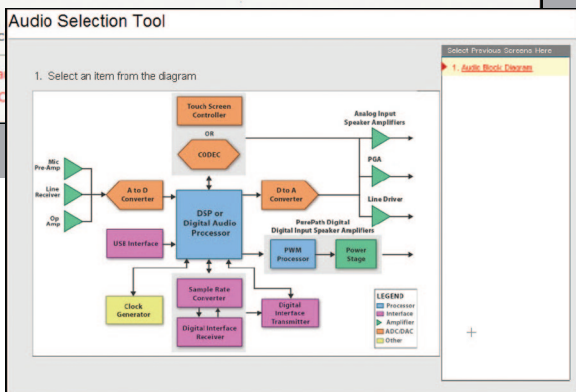
Output 2

Vout (V) Iout (A)

☐ Search for devices with more than two outputs

☐ Search

> TurboTra
 > Battery C



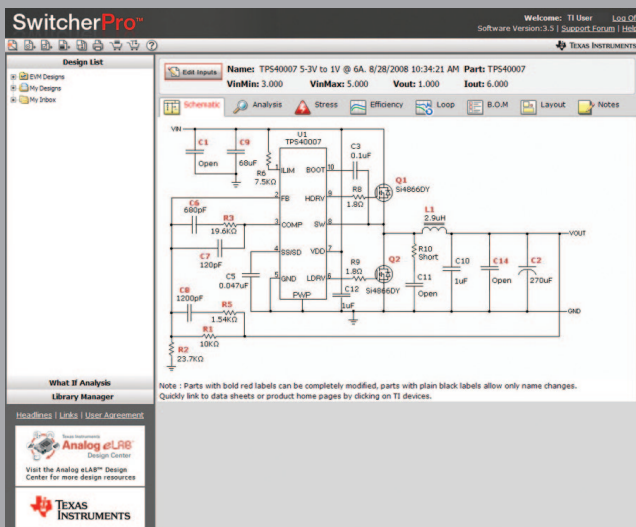
www.ti.com/audiotool

- A quick way to select a device for a design.
- Help designers quickly narrow choices.
- Created with help from product experts.
- Selection tools available for most analog product lines.

For an updated list of selection tools, go to
www.ti.com/elab.

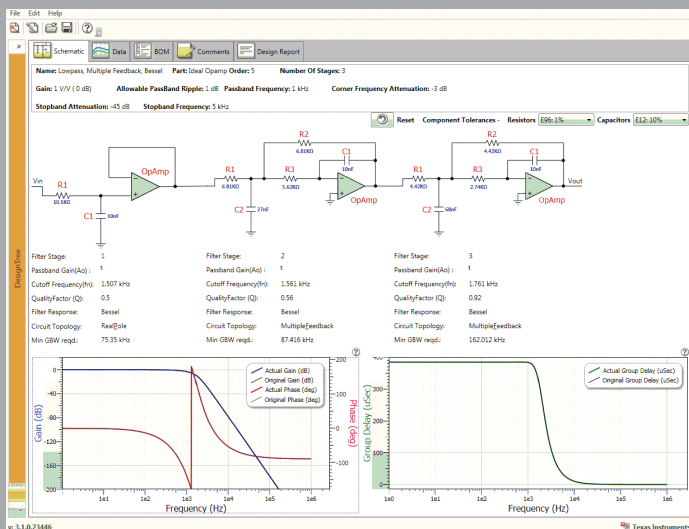
SwitcherPro™ Software

www.ti.com/switcherpro

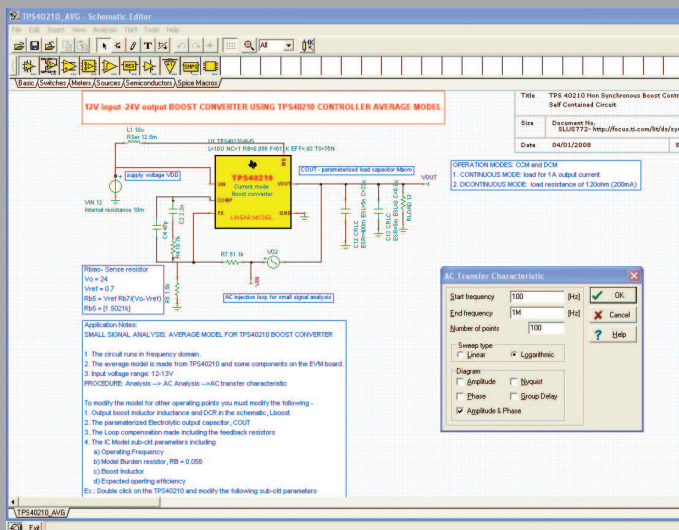


- Develop solutions for buck and boost DC/DC controllers and converters.
- Design internally and externally compensated high-performance power supply designs.
- Available online and downloadable to your desktop.
- Create and/or copy a design in about one minute using the Power Design Wizard.
- Generate schematics and bill of materials for your design and view layout suggestions.
- Calculate power supply specs, losses, and loop response. Hand-optimize designs with "What If Analysis."
- Edit your designs, customize labels, access library with built-in components and add your own components.
- Share your designs using the design report generation in pdf format.

Get more out of your designs
using SwitcherPro™ software.



- Create and edit designs with ease using the Filter Design Wizard.
- Design Multiple Feedback (MFB) and Sallen-Key low-pass and high-pass filters using voltage feedback op amps.
- Filter response types include Bessel, Butterworth, Chebychev with arbitrary ripple, Gaussian and Linear Phase.
- Differential Multiple Feedback topology also supported for most filter types.
- Generate schematics, view frequency and time delay responses, and print a bill of materials.
- Save all data points in Excel format if needed.
- Create professional looking PDF design reports for your filter designs.
- Supports scaling of element values.
- Supports notch/band-stop, band-pass filters, all-pass phase shifter and time delay filters.
- Easy calculation of passive components for complex filters.
- Supports design file migration from FilterPro v2.0.

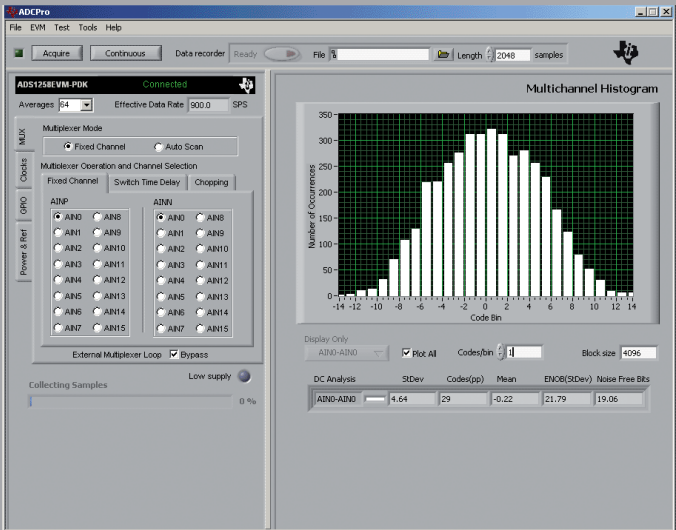


- Easy-to-use, powerful, SPICE-based analog simulation program.
- TINA-TI™ software is a fully functional version of TINA, loaded with a library of TI macromodels, including passive and active models.
- Provides support for amplifiers and switching power supply devices.
- TINA-TI simulation software has no limits to circuit size, number of nodes or number of integrated circuits (ICs).
- Generates post-simulation results in tables and plots.
- Built-in virtual oscilloscope, function generator and spectrum analyzer.
- View all TINA-TI and PSpice models at www.ti.com/spicerack.

Using another simulator?

TI also provides PSpice, HSpice, IBIS, and BSDL models.

Go to www.ti.com/elab.



- Modular software system for evaluating analog-to-digital converters (ADCs) without need for expensive analyzers.
- Stand-alone tool suitable for analyzing data sets captured during ADC testing.
- Ability to save and recall data sets.
- Modular design allows support for additional evaluation modules (EVMs) and tests.
- Time, histogram and frequency domain testing.
- Able to analyze data sets without any hardware.

PCB Thermal Calculator

www.ti.com/pcbthermalcalc



- Input package characteristics, such as ThetaJ, power dissipation and ambient temperature to obtain tradeoffs between PCB copper area and temperature.
- Estimates how much power can be dissipated in the design.
- Check it out at www.ti.com/pcbthermalcalc.



- ClockPro™ software allows you to program/configure these clocking devices:
 - CDCE949/937/925/913/906/706
 - CDCEL949/937/925/913
- Easy and fast programming.
- Friendly graphical user interface (GUI).

Other Tools and Samples

www.ti.com/refdesigns

Reference Designs

- A wide variety of reference designs developed by TI.
- Solutions vary in their target applications and uses.
- Contain schematic and bill of materials.
- Many provide additional detailed technical information.

www.ti.com/sbd

System Block Diagrams

- End equipment solutions support.
- More than 140 block diagrams guiding you to the best-fit TI devices for your application.
- Select from specific applications within Computing, Communications, Medical, Industrial, Consumer and other areas.

www.ti.com/utilities

Calculators and Other Utilities

- Design, component, and software design calculators speed calculations to a fraction of the time of manual calculations.
- Plug-ins, design and loop filter utilities available.

www.ti.com/elabhowtobuy

Samples

- Order free samples any time—more than 15,000 analog devices available—samples shipped in 24 hours.
- Order evaluation modules (EVMs) from TI's eStore.
- More than 1,000 analog and power EVMs available.

The screenshot shows the TI E2E™ Community website. The header includes the Texas Instruments logo and navigation links for Products, Applications, Design Support, and Sample & Buy. The main content area is titled "Analog eLab™ and Tools" and includes a welcome message, a search bar, and a list of forums. The forums list includes "Analog eLab™ and Tools Forum", "Analog eLab™ News and Announcements Forum", "Simulation and Models Forum", and "SwitcherPro™ Power Supply Designer Forum". The "All Recent | Unanswered" section shows a list of recent posts with topics like "Using TI's PSPICE Power Macro Models", "TINA", and "variable resistor in TinaTI".

TI E2E™ Community

Support • Videos • Blogs

Analog eLab™ and Tools

Welcome to the Analog eLab Section of the TI E2E Support Community. Ask questions, share knowledge, explore ideas, and help solve problems with fellow engineers. Products covered in this section are Analog Audio Amplifiers. To post a question, click on the forum tab, select your forum, then click "New Post".

Home | Blog | Forums | Video & Files | Design Notes

Browse Forums

Forum	Posts	Last Post
Analog eLab™ and Tools Forum	29	19 Feb 2010
Analog eLab™ News and Announcements Forum	35	21 Jan 2010
Simulation and Models Forum	45	31 Mar 2010
SwitcherPro™ Power Supply Designer Forum	412	30 Mar 2010

All Recent | Unanswered

Topic	Date	Replies
Announcement: Using TI's PSPICE Power Macro Models	Latest post by SaraR 4 Mar 2010 5:30 PM Posted in Simulation and Models Forum	0
TINA	Latest post by Rick Downs 31 Mar 2010 1:30 PM Posted in Simulation and Models Forum	1
variable resistor in TinaTI	Latest post by Rick Downs 31 Mar 2010 1:11 PM Posted in Simulation and Models Forum	1

The Analog eLab™ E2E™ community provides you with technical support forums, videos, blogs and interaction with the designers who helped develop eLab tools. Forums are broken out into specific areas for your convenience:

- www.ti.com/e2e-elab
General forum where you can submit any eLab related question or comment.
- www.ti.com/e2e-simulation
Simulation and modeling forum where you can discuss simulation needs.
- www.ti.com/e2e-switcherpro
Forum where you can talk to designers about issues, questions and comments about SwitcherPro™ software.
- www.ti.com/e2e-filterpro
Forum where you can talk to designers about issues, questions and comments about FilterPro™ software.

TI Worldwide Technical Support

Internet

TI Semiconductor Product Information Center Home Page

support.ti.com

TI E2E™ Community Home Page

e2e.ti.com

Product Information Centers

Americas	Phone	+1(972) 644-5580
Brazil	Phone	0800-891-2616
Mexico	Phone	0800-670-7544
	Fax	+1(972) 927-6377
	Internet/Email	support.ti.com/sc/pic/americas.htm

Europe, Middle East, and Africa

Phone

European Free Call 00800-ASK-TEXAS
(00800 275 83927)

International +49 (0) 8161 80 2121

Russian Support +7 (4) 95 98 10 701

Note: The European Free Call (Toll Free) number is not active in all countries. If you have technical difficulty calling the free call number, please use the international number above.

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Domestic Toll-Free Number

Australia 1-800-999-084

China 800-820-8682

Hong Kong 800-96-5941

India 1-800-425-7888

Indonesia 001-803-8861-1006

Korea 080-551-2804

Fax +886-2-2378-6808

Internet support.ti.com/sc/pic/asia.htm

Malaysia 1-800-80-3973

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Philippines 1-800-765-7404

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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
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