TwisterSIM

Dynamic Electro-Thermal simulator for VIPower products

GAPG1011141055RI

Features

- Device pre-selection using simple high level compatibility criteria
- Device selection fine-tuning with PCB Layout specification
- Supply voltage and Input Signal source selection
- Load type selection
- Wire harness selection
- Ambient temperature selection
- Simulation accuracy and time selection
- Built-in VIPower® technology tutorial
- Built-in user manual
- Free evaluation version

- Free full version (requires user activation code)

Description

TwisterSIM is a unique Electro-Thermal simulator that helps shorten the design solution cycle by enabling, in a few clicks, complex engineering evaluations with accurate simulations like load-compatibility, wiring harness optimization, fault condition impact analysis, diagnostic behavior analysis and Dynamic Thermal performance.

A built-in Interactive Selector provides a short list of suitable devices based on first level system requirements. It assists you in detailing your actual system configuration with layout, load and driving profile customization to build an accurate model of the final application.

Simulation results, including junction and case thermal profiles, load current and diagnostic behavior are shown on dedicated scopes views or exported in a number of different commonly used formats.

TwisterSIM supports a large selection of Low/High-side driver/switches and H-bridges for Motor Control.

A trial version, to explore the main functionalities of TwisterSIM, is available for download at www.st.com/twistersim and it also contains, in the main toolbar, the instructions to request an activation code (free of charge but subject to STMicroelectronics approval) for the full version.

An on-line forum provides additional support to TwisterSIM users. Access to the forum is available at http://www.st.com/twistersim-forum.

Table 1: Device summary

Order code	Reference
TwisterSIM	TwisterSIM

For further information contact your local STMicroelectronics sales office

Contents

1 System requirements

- Windows 7
- .NET Framework 2.0
- Microsoft Visual C++ 2005/2008 Redistributable

2   Interactive selector

Providing application conditions and loads specifications, TwisterSIM displays the list of recommend VIPower products including their thermal behavior.

Figure 1: Interactive selector

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3   Electro-thermal simulation

For the chosen device you can run electro-thermal dynamic simulations and fine tune device identification by an in-depth analysis of its behaviour in the target application through graphical representation of the electrical and thermal data. Simulation results can be saved and exported for further analysis.

Figure 2: Simulation results
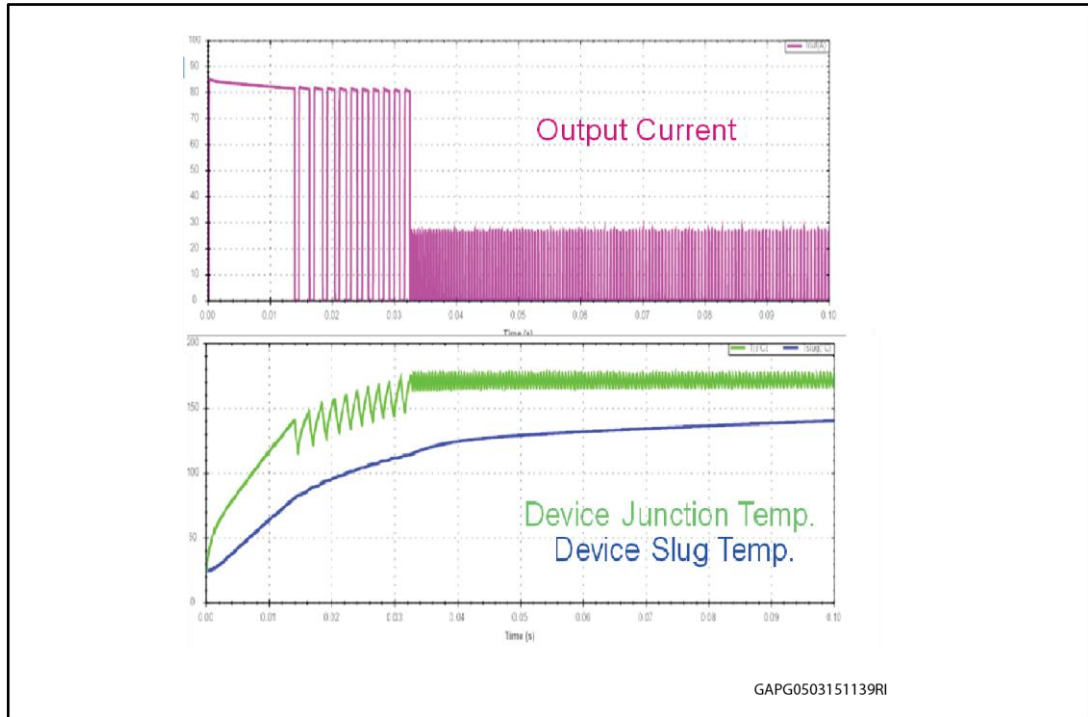
4   TwisterSIM evaluation version download flow

Figure 3: TwisterSIM evaluation version download flow
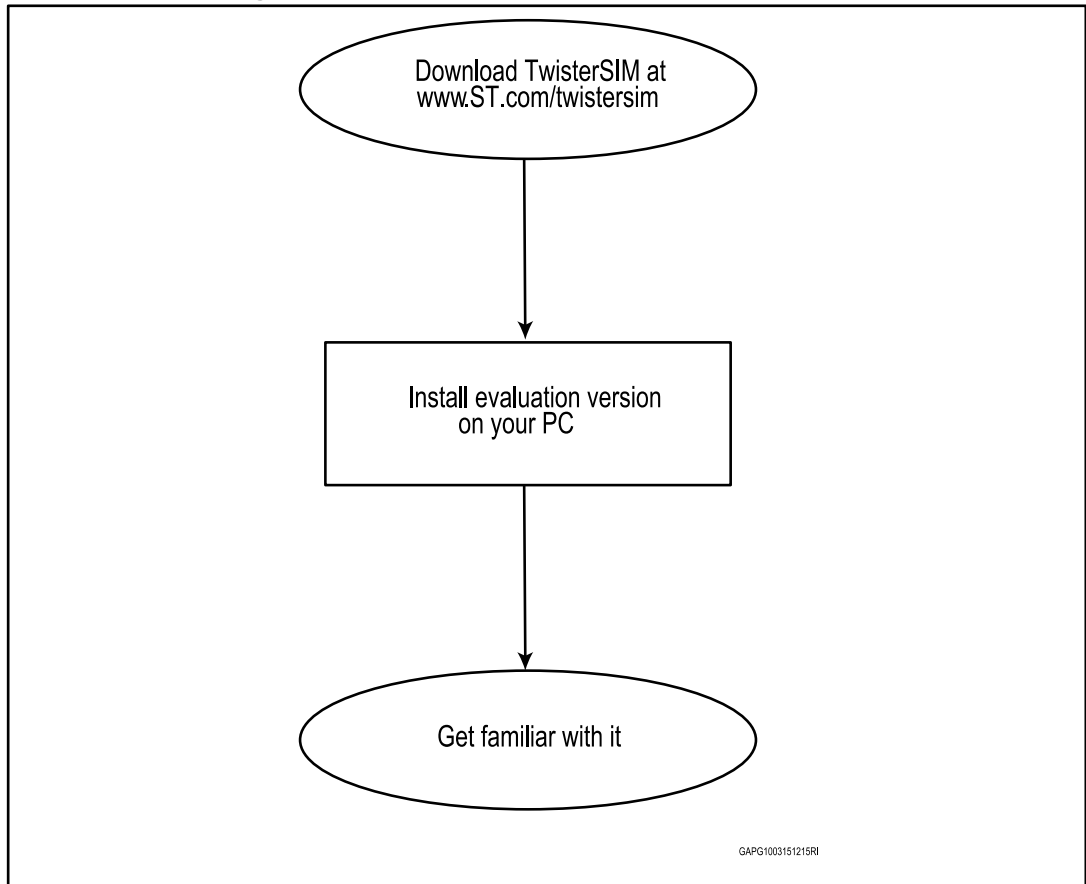
5   Full version request and activation flow

From TwisterSIM toolbar "Registration Info" you can easily require and receive by mail the activation code to get the tool full version .
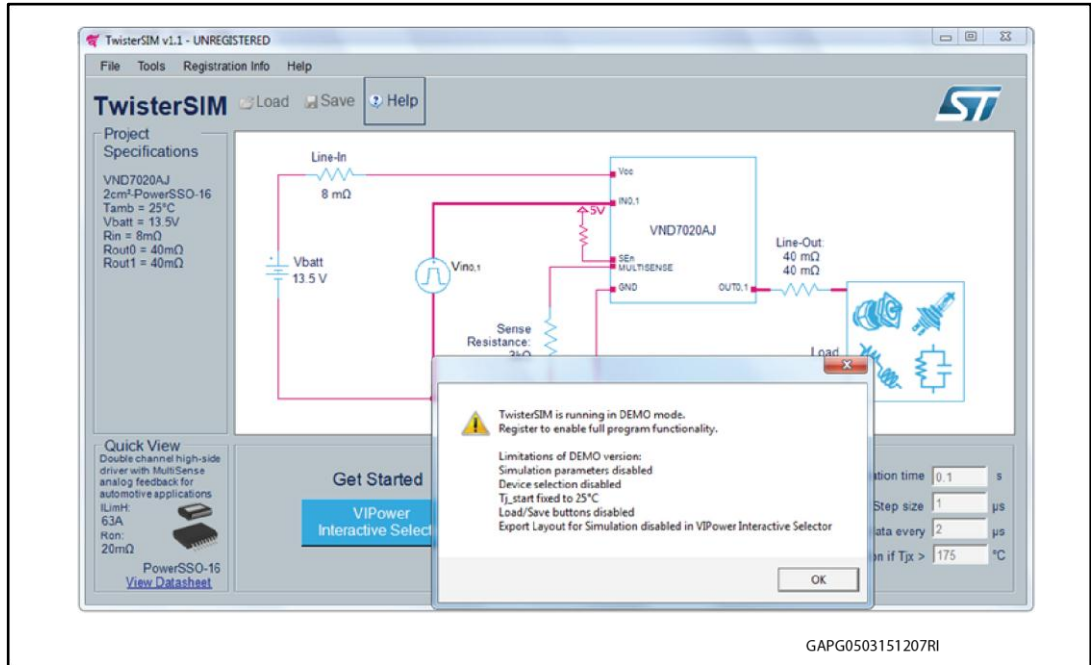
Figure 4: TwisterSIM full version activation request

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Figure 5: TwisterSIM registration code

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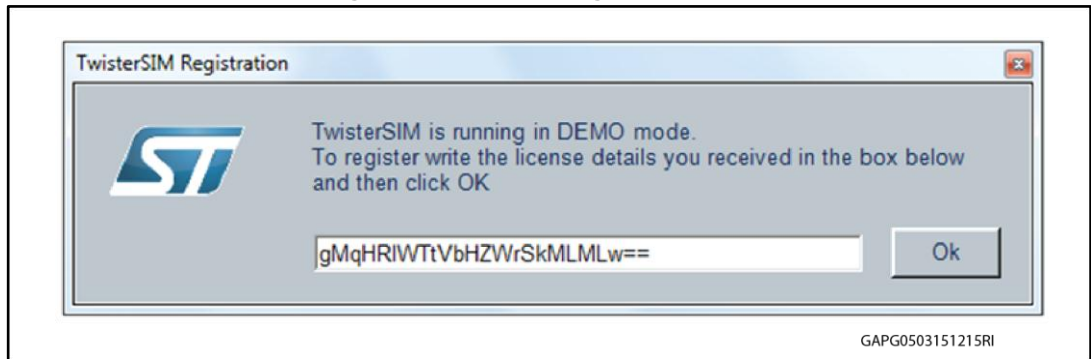
Figure 6: TwisterSIM full version activation flow

Request Full Version activation code

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Send activation code request by
Traceable email
(subject to STMicroelectronics approval)

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Receive activation code by email

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Insert activation code

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Enjoy full version

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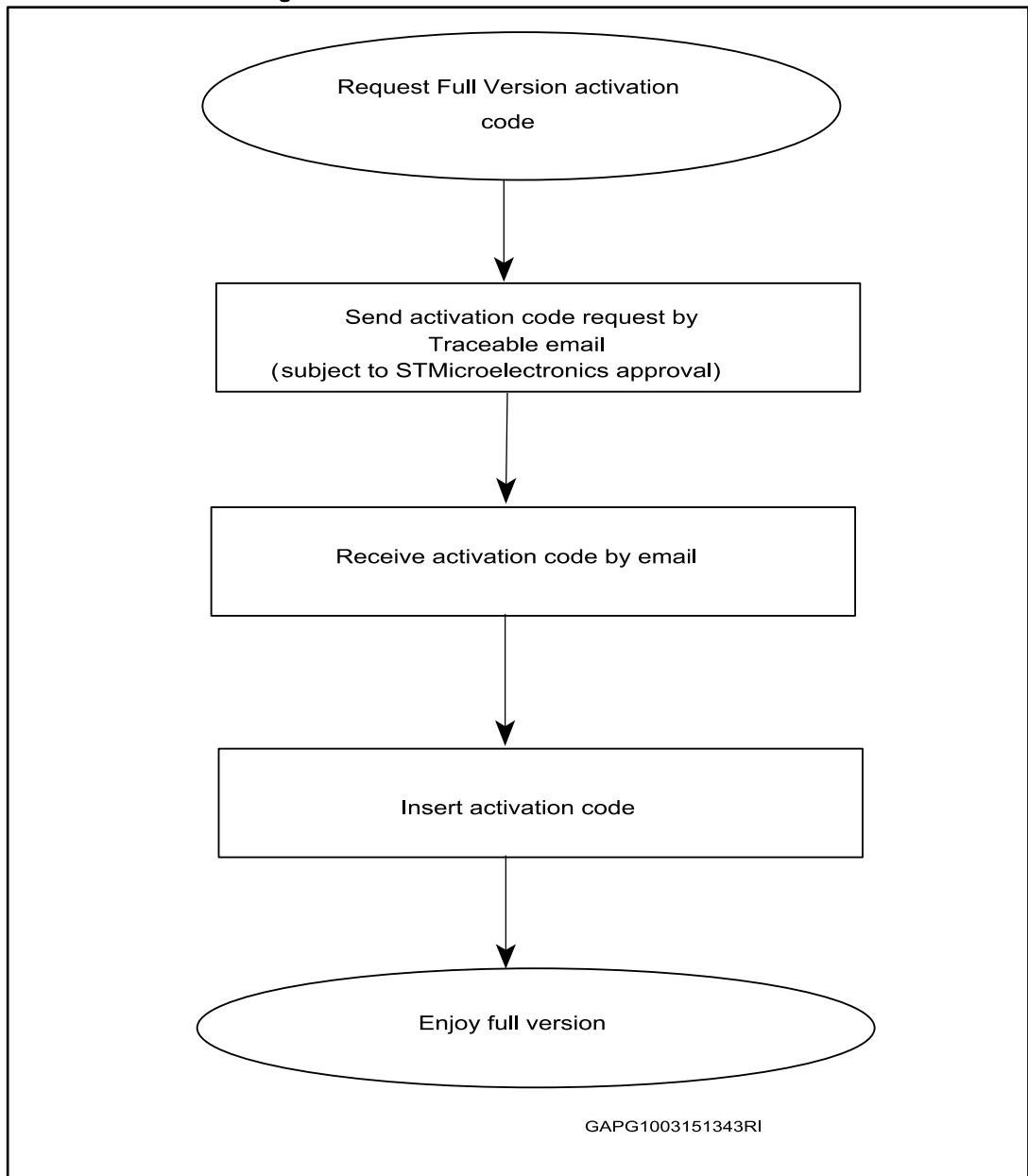
6   Revision history

Table 2: Revision history

Date	Revision	Changes
10-Nov-2014	1	Initial release.
19-Jan-2015	2	Updated Description and the image in the cover
13-Mar-2015	3	Updated figure in Cover page. Updated *Section "Description"*. Added *Section 2: "Interactive selector"*; *Section 3: "Electro-thermal simulation"*; *Section 4: "TwisterSIM evaluation version download flow"*; *Section 5: "Full version request and activation flow"*
16-Mar-2015	4	Changed the url www.st.com/twisterforum in www.st.com/twistersim-forum in *Section "Description"*
29-Apr-2015	5	Updated *Section "Description"*.

IMPORTANT NOTICE – PLEASE READ CAREFULLY