



THE DATASHEET OF STEVAL-ISA018V1





STEVAL-ISA018V1

150 W (240 W peak) resonant SMPS demonstration board based on the L6599

Data brief

Features

- Input voltage range:
 - 185 to 265 Vac
 - 85 to 185 Vac (with voltage double)
- Input frequency range 50/60 Hz
- Output voltage 24 V \pm 2%
- Output power 150 W (240 W peak)
- Compliant with standards:
 - EN60950 for safety
 - EN55014 for EMI
- RoHS compliant

Description

The STEVAL-ISA018V1 demonstration board presents a high efficiency solution for industrial switched-mode power supplies (SMPS) up to 150 W continuous output power, with peak power of 240 W. The design takes advantage of a resonant approach to minimize switching losses, resulting in efficiency higher than 90%.

The design is based on a half-bridge topology operated in a resonant manner by means of a resonant LC tank, driven by a dedicated L6599 high-voltage resonant controller.

The board provides one regulated output, $V_O = 24$ V with $I_O = 6$ A and overload capability up to $I_O = 10$ A.

Output voltage and current are controlled by a secondary-side IC (TSM1011), which provides square output regulation, while the overload is managed by thermal protection (PTC) on the output rectifiers.



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Apr-2010	1	Initial release.

Obsolete Product(s) - Obsolete Product(s)

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2010 STMicroelectronics - All rights reserved



STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View STEVAL-ISA018V1 on WIN SOURCE](#)
-  [STMicroelectronics](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management