

Import SIMetrix simulation output data into MS Excel

Step-by-Step Guide

IFNA PMM SMD
Anders Lind

User Guide

About this document

Scope and purpose

This document serves as a step-by-step guide to export data from a SIMetrix simulation output into an MS Excel spreadsheet.

Intended audience

This document is intended to accompany the Application Note “Detailed MOSFET Behavioral Analysis using Parameters Extracted from Models”.

As described and exemplified in said App Note it can be quite useful to transfer data from a simulation output to a CSV (Comma Separated Values) or similar file/format for later use

Table of Contents

1	Exporting ASCII data from SIMetrix simulation output step-by-step.....	2
1.1	Troubleshooting tips:.....	4

Exporting ASCII data from SIMetrix simulation output

1 Exporting ASCII data from SIMetrix simulation output

The starting point is a simulation output from a SIMetrix simulation:

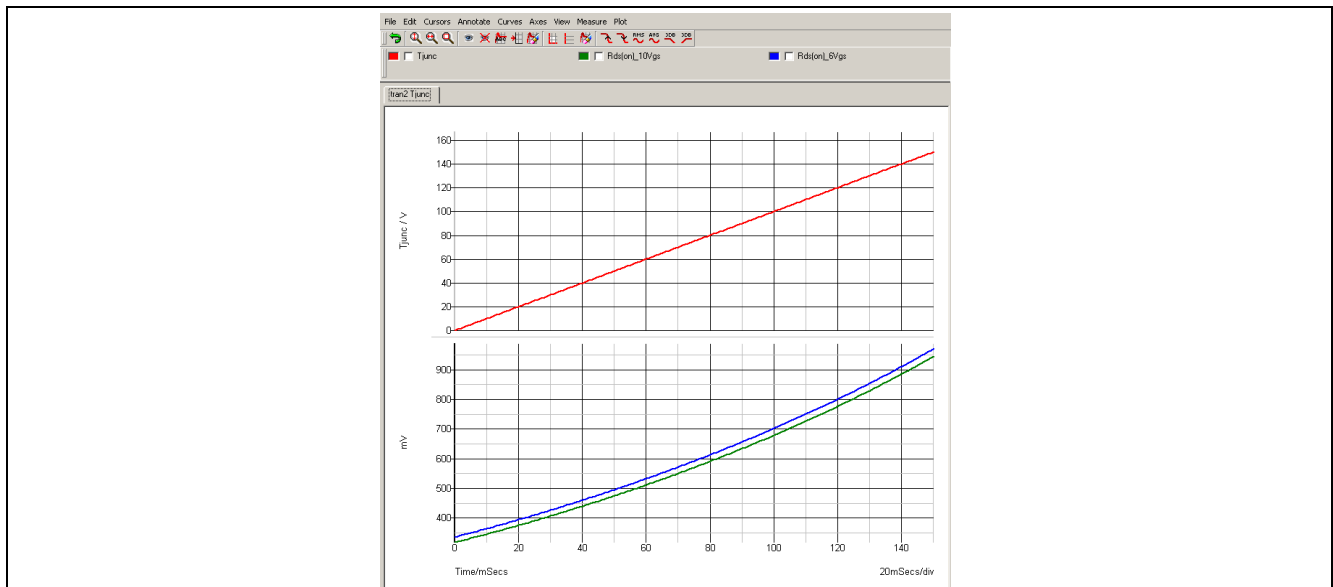


Figure 1 Example simulation output from a simulation model parameter extraction test bench

- **Step 1**
 - Click “Edit” in the top menu of SIMetrix and select “Copy ASCII data”:

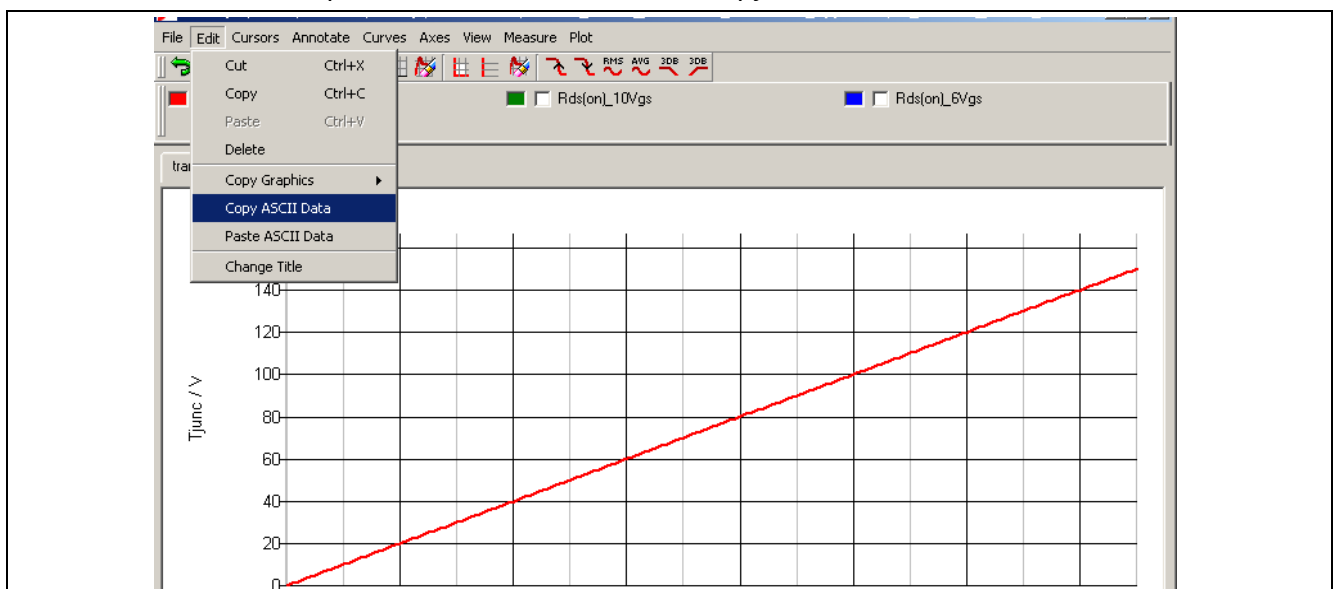


Figure 2 File menu selection tree for copying the ASCII data of simulation output to the clipboard

The SW (Software) will ask you which of the simulation output curves you would like to export:

- **Step 2:**
 - Select the desired curves/traces or you can click “Select All” as done here:

Exporting ASCII data from SIMetrix simulation output

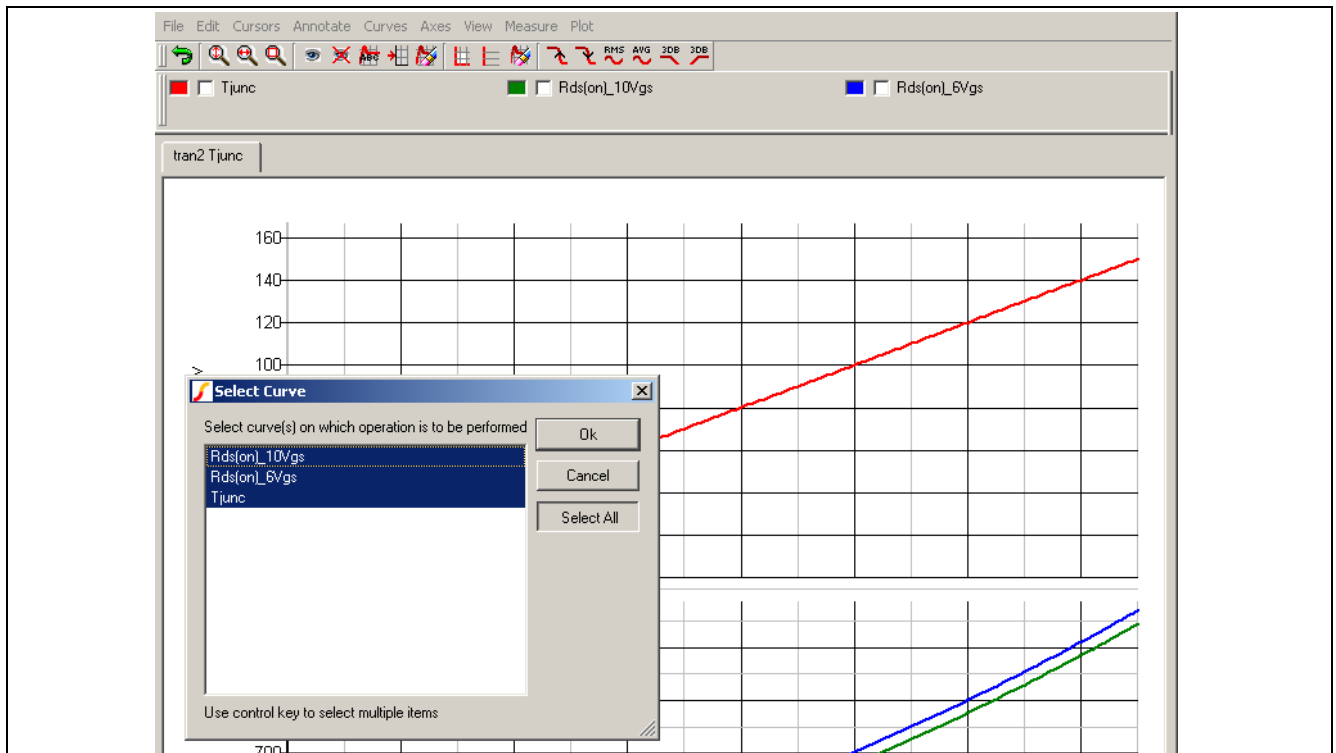


Figure 3 Selection of appropriate/desired simulation output data to be copied to clipboard

Click OK to export the data onto your computer's clipboard

- **Step 3:**
 - Open an instance of MS Excel, so you have a new workbook with a blank sheet (can also be inserted into existing workbook on new sheet or into a sheet that already contains data):

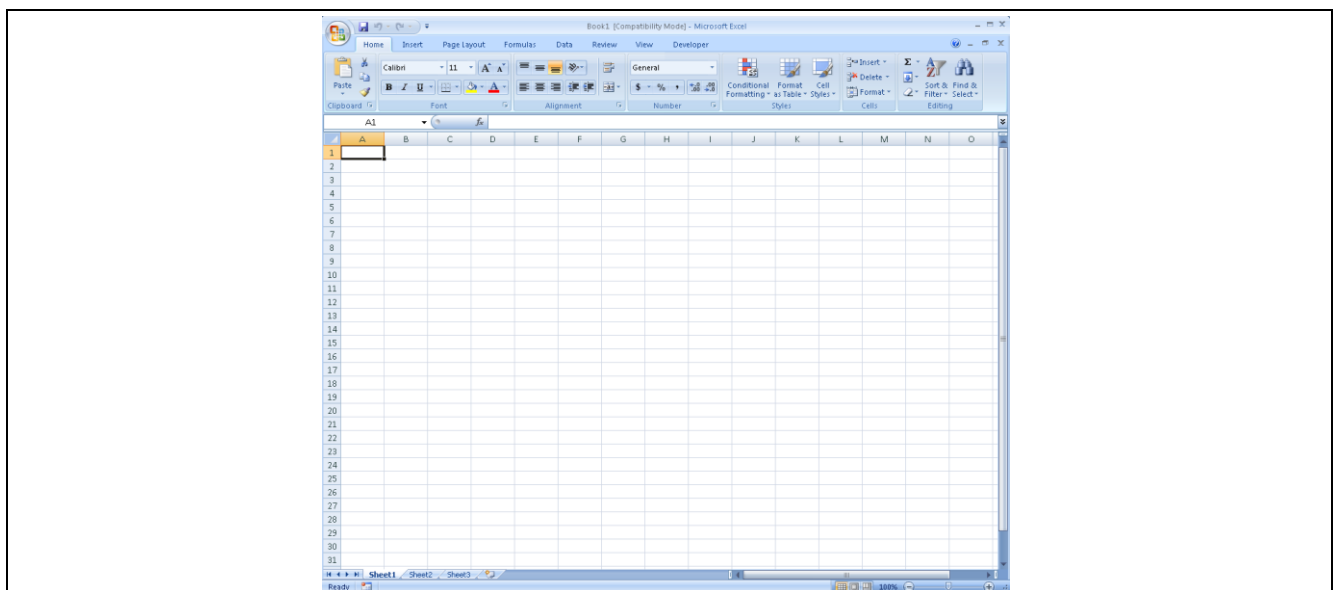


Figure 4 Creating a new blank Excel worksheet for the data contained on clipboard

Exporting ASCII data from SIMetrix simulation output

- **Step 4:**
 - Click on the cell at the location where you desire the data to be placed. Right-click and select “paste” (or press Ctrl+V):

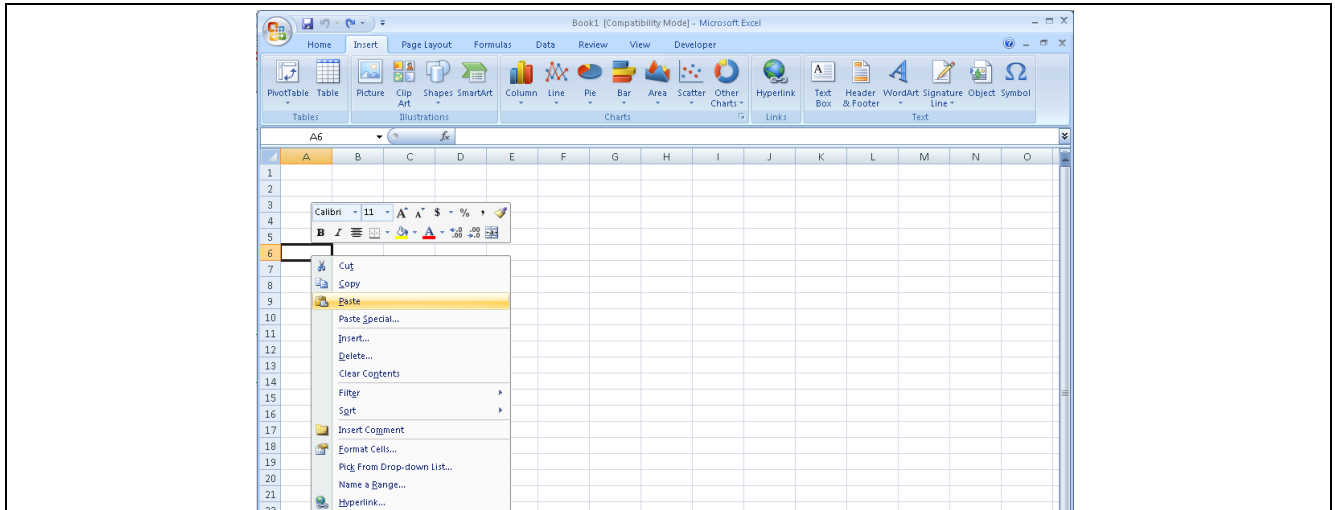


Figure 5 Pasting the extracted simulation data into an excel worksheet

The data will be inserted into the Excel worksheet and can be used for further analysis/manipulation

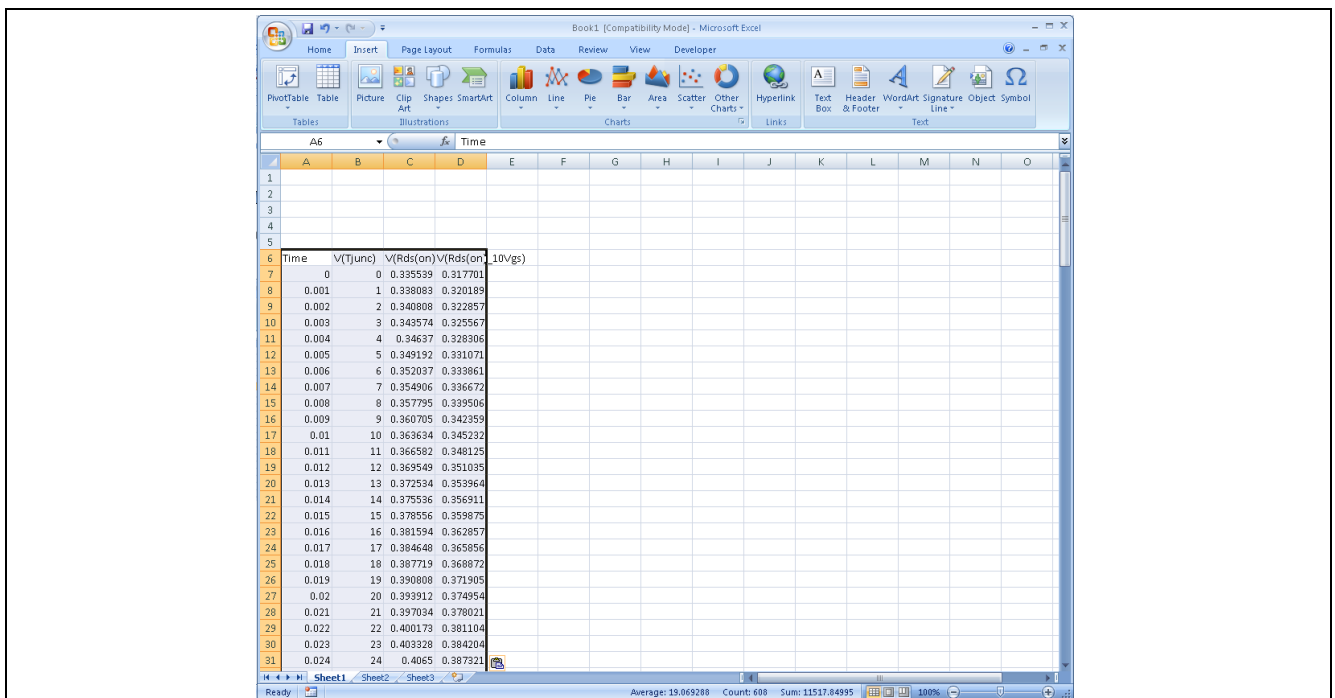


Figure 6 Visual confirmation that desired data was inserted into desired excel worksheet

1.1 Troubleshooting tips:

- MS Excel is not meant to handle large data-sets. If data-sets (or single-vectors) are greater than ~65k values, the amount of data should be reduced to better fit in the frame-work of MS Excel. For the

Exporting ASCII data from SIMetrix simulation output

purposes described in the accompanying App Note, much smaller data-set sizes are comfortably sufficient.

- In order to control the amount of data (resolution) in the set, the simulator settings should be appropriately defined:

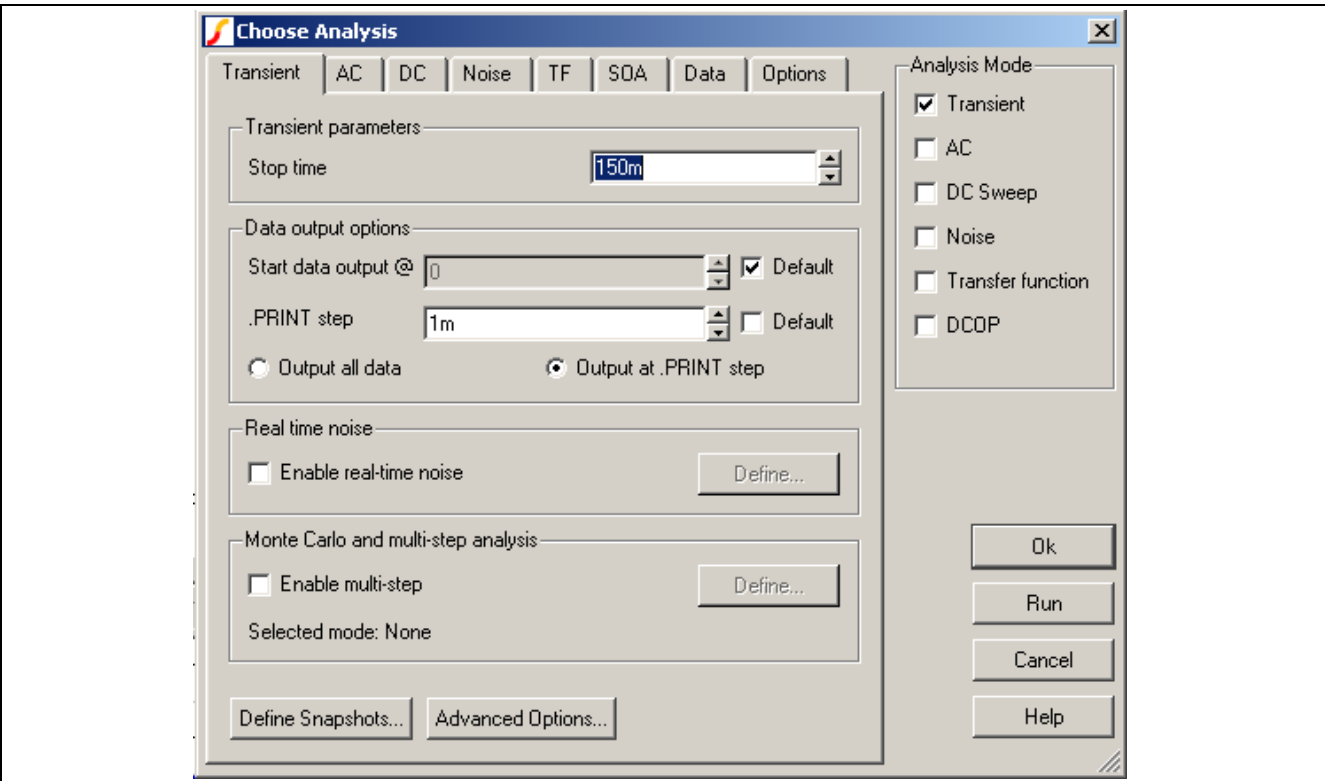


Figure 7 Example of appropriate simulation output resolution setting; here a time resolution of 1ms

In above example the SIMetrix “Simulator” options are set with a “.PRINT step” of 1 ms and the output is restricted to this print step size. The output of the simulation is thus in time-steps of 1 ms (constant time step size can be an advantage in simulations – particularly in the context of the simulations described in accompanying Application Note.

Revision History

Major changes since the last revision

Page or Reference	Description of change
--	First Release

Trademarks of Infineon Technologies AG

AURIX™, C166™, CanPAK™, CIPOS™, CIPURSET™, CoolGaN™, CoolMOS™, CoolSET™, CoolSiC™, CORECONTROL™, CROSSAVET™, DAVE™, DI-POL™, DrBLADE™, EasyPIM™, EconoBRIDGE™, EconoDUAL™, EconoPACK™, EconoPIM™, EiceDRIVER™, eupec™, FCOS™, HITFET™, HybridPACK™, ISOFACE™, IsoPACK™, i-Wafer™, MIPAQ™, ModSTACK™, my-d™, NovalithIC™, OmniTune™, OPTIGA™, OptiMOS™, ORIGA™, POWERCODE™, PRIMARION™, PrimePACK™, PrimeSTACK™, PROFET™, PRO-SIL™, RASIC™, REAL3™, ReverSave™, SatRIC™, SIEGET™, SIPMOS™, SmartLEWIS™, SOLID FLASH™, SPOC™, TEMPFET™, thinQ!™, TRENCHSTOP™, TriCore™.

Other Trademarks

Advance Design System™ (ADS) of Agilent Technologies, AMBA™, ARM™, MULTI-ICE™, KEIL™, PRIMECELL™, REALVIEW™, THUMB™, μVision™ of ARM Limited, UK. ANSI™ of American National Standards Institute. AUTOSAR™ of AUTOSAR development partnership. Bluetooth™ of Bluetooth SIG Inc. CAT-iq™ of DECT Forum. COLOSSUS™, FirstGPS™ of Trimble Navigation Ltd. EMV™ of EMVCo, LLC (Visa Holdings Inc.). EPCOS™ of Epcos AG. FLEXGO™ of Microsoft Corporation. HYPERTERMINAL™ of Hilgraeve Incorporated. MCS™ of Intel Corp. IEC™ of Commission Electrotechnique Internationale. IrDA™ of Infrared Data Association Corporation. ISO™ of INTERNATIONAL ORGANIZATION FOR STANDARDIZATION. MATLAB™ of MathWorks, Inc. MAXIM™ of Maxim Integrated Products, Inc. MICROTEC™, NUCLEUS™ of Mentor Graphics Corporation. MIPI™ of MIPI Alliance, Inc. MIPS™ of MIPS Technologies, Inc., USA. muRata™ of MURATA MANUFACTURING CO., MICROWAVE OFFICE™ (MWO) of Applied Wave Research Inc., OmniVision™ of OmniVision Technologies, Inc. Openwave™ of Openwave Systems Inc. RED HAT™ of Red Hat, Inc. RFMD™ of RF Micro Devices, Inc. SIRIUS™ of Sirius Satellite Radio Inc. SOLARIS™ of Sun Microsystems, Inc. SPANSION™ of Spansion LLC Ltd. Symbian™ of Symbian Software Limited. TAIYO YUDEN™ of Taiyo Yuden Co. TEAKLITE™ of CEVA, Inc. TEKTRONIX™ of Tektronix Inc. TOKO™ of TOKO KABUSHIKI KAISHA TA. UNIX™ of X/Open Company Limited. VERILOG™, PALLADIUM™ of Cadence Design Systems, Inc. VLYNQ™ of Texas Instruments Incorporated. VXWORKS™, WIND RIVER™ of WIND RIVER SYSTEMS, INC. ZETEX™ of Diodes Zetex Limited.

Last Trademarks Update 2014-07-17

www.infineon.com

Edition 2014-12-16

Published by

Infineon Technologies AG

81726 Munich, Germany

© 2015 Infineon Technologies AG.

All Rights Reserved.

Do you have a question about any aspect of this document?

Email: erratum@infineon.com

Legal Disclaimer

THE INFORMATION GIVEN IN THIS APPLICATION NOTE (INCLUDING BUT NOT LIMITED TO CONTENTS OF REFERENCED WEBSITES) IS GIVEN AS A HINT FOR THE IMPLEMENTATION OF THE INFINEON TECHNOLOGIES COMPONENT ONLY AND SHALL NOT BE REGARDED AS ANY DESCRIPTION OR WARRANTY OF A CERTAIN FUNCTIONALITY, CONDITION OR QUALITY OF THE INFINEON TECHNOLOGIES COMPONENT. THE RECIPIENT OF THIS APPLICATION NOTE MUST VERIFY ANY FUNCTION DESCRIBED HEREIN IN THE REAL APPLICATION. INFINEON TECHNOLOGIES HEREBY DISCLAIMS ANY AND ALL WARRANTIES AND LIABILITIES OF ANY KIND (INCLUDING WITHOUT LIMITATION WARRANTIES OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY) WITH RESPECT TO ANY AND ALL INFORMATION GIVEN IN THIS APPLICATION NOTE.

Information

For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office. Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.