Fujitsu Semiconductor Europe

CI-300113-E-V10

32-BIT MICROCONTROLLER STARTERKIT

SK-FM3-100PMC

FUNCTIONAL LIMITATION

CUSTOMER INFORMATION

Revision History

Date	Issue
2011-05-02	V1.0; 1st version; MWi

This document contains 6 pages.

 © Fujitsu Semiconductor Europe GmbH

Warranty and Disclaimer

The use of the deliverables (e.g. software, application examples, target boards, evaluation boards, starter kits, schematics, engineering samples of IC's etc.) is subject to the conditions of Fujitsu Semiconductor Europe GmbH ("FSEU") as set out in (i) the terms of the License Agreement and/or the Sale and Purchase Agreement under which agreements the Product has been delivered, (ii) the technical descriptions and (iii) all accompanying written materials.

Please note that the deliverables are intended for and must only be used for reference in an evaluation laboratory environment.

The software deliverables are provided on an as-is basis without charge and are subject to alterations. It is the user's obligation to fully test the software in its environment and to ensure proper functionality, qualification and compliance with component specifications.

Regarding hardware deliverables, FSEU warrants that they will be free from defects in material and workmanship under use and service as specified in the accompanying written materials for a duration of 1 year from the date of receipt by the customer.

Should a hardware deliverable turn out to be defect, FSEU's entire liability and the customer's exclusive remedy shall be, at FSEU´s sole discretion, either return of the purchase price and the license fee, or replacement of the hardware deliverable or parts thereof, if the deliverable is returned to FSEU in original packing and without further defects resulting from the customer's use or the transport. However, this warranty is excluded if the defect has resulted from an accident not attributable to FSEU, or abuse or misapplication attributable to the customer or any other third party not relating to FSEU or to unauthorised decompiling and/or reverse engineering and/or disassembling.

FSEU does not warrant that the deliverables do not infringe any third party intellectual property right (IPR). In the event that the deliverables infringe a third party IPR it is the sole responsibility of the customer to obtain necessary licenses to continue the usage of the deliverable.

In the event the software deliverables include the use of open source components, the provisions of the governing open source license agreement shall apply with respect to such software deliverables.

To the maximum extent permitted by applicable law FSEU disclaims all other warranties, whether express or implied, in particular, but not limited to, warranties of merchantability and fitness for a particular purpose for which the deliverables are not designated.

To the maximum extent permitted by applicable law, FSEU's liability is restricted to intention and gross negligence. FSEU is not liable for consequential damages.

Should one of the above stipulations be or become invalid and/or unenforceable, the remaining stipulations shall stay in full effect.

The contents of this document are subject to change without a prior notice, thus contact FSEU about the latest one.

Contents

REVISION HISTORY **2**

WARRANTY AND DISCLAIMER **3**

CONTENTS **4**

1 PROBLEM DESCRIPTION **5**

2 PROBLEM CONDITIONS **5**

3 AFFECTED TOOLS **5**

4 ROOT CAUSE **5**

5 WORKAROUND **6**

5.1 Do not use the ADC 6

5.2 Hardware Modification 6

 © Fujitsu Semiconductor Europe GmbH

1 Problem Description

The external capacitors for the MAX3232 are to small according MAXIM™'s specification for usage between VCC = 3.3 Volts and VCC = 5 Volts, resulting in a VCC noise ripple. This ripple influences the AVCC and AVRH analog supply and reference voltage inputs, which leads to inaccurate ADC conversion results.

2 Problem Conditions

The problem described in chapter 1 is persistent.

3 Affected Tools

All SK-FM3-100PMC boards of revision V1.0

4 Root Cause

The problem is caused by schematic components choice error.

5 Workaround

5.1 Do not use the ADC

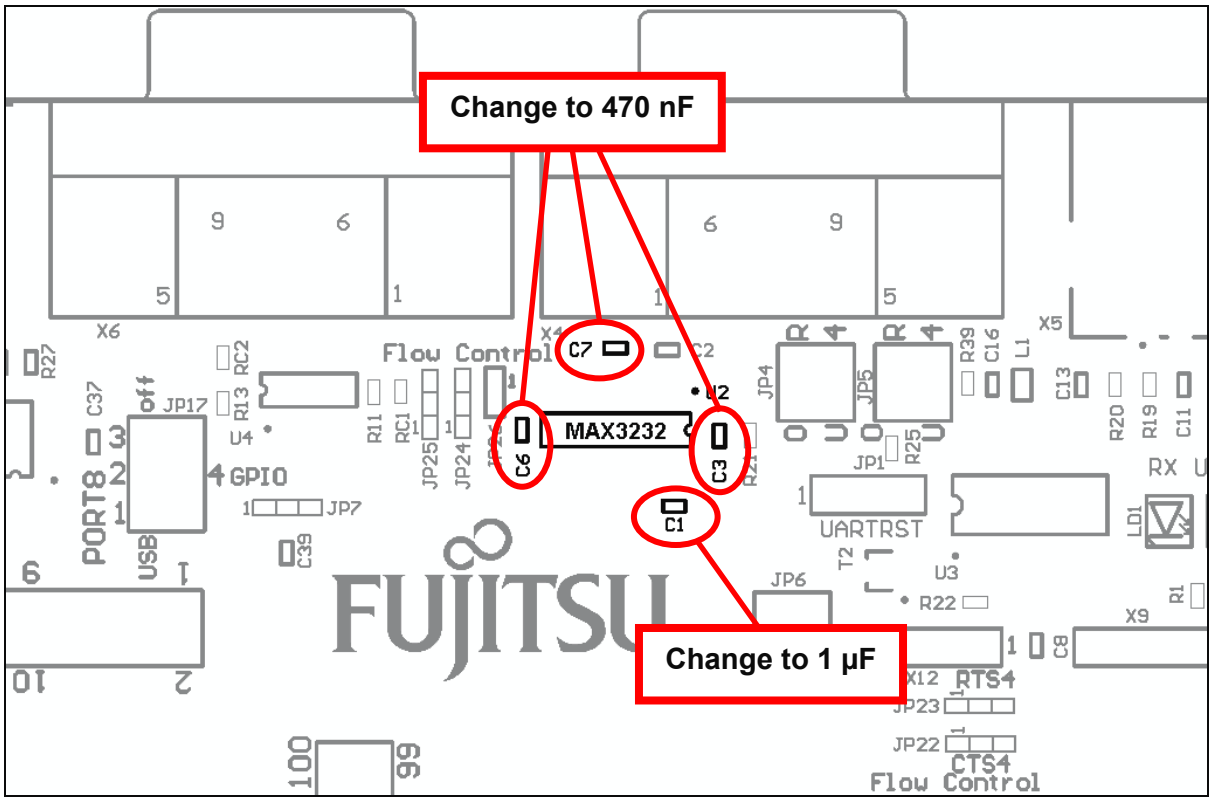
If the ADC is not used, no problem occurs caused of the too small capacitors.

5.2 Hardware Modification

For ADC usage the following capacitors have to be replaced with new values:

Capacitor reference	Old value	New corrected value
C1	100 nF	1 µF
C3	100 nF	470 nF
C6	100 nF	470 nF
C7	100 nF	470 nF

The capacitors are located on the board shown in the illustration below:



If you need help to perform these modifications, contact micro_info@fme.fujitsu.com.

 © Fujitsu Semiconductor Europe GmbH