200519780 Addendum to 190123442 EFM8 BB3 Silicon Revision C

PRCN Issue Date: 5/19/2020

Effective Date: 12/31/2020

PCN Type: Product Revision

Description of Change

This addendum to PRCN 190123442 is being issued to extend the availability of revision B for the BB3 products due to large demand. This addendum does not affect the revision B availability for the LB1 products which have been announced End of Life (EOL PCN 200114699).

Original PRCN Change Description:

Silicon Labs is pleased to announce the release of silicon revision C for the EFM8 LB1 and BB3 products. Silicon Labs is also pleased to announce the release of version 1.3 of the EFM8LB1 and EFM8BB3 datasheets.

The device changes accompanied by this silicon revision are as follows:
-P0.3 will no longer drive low on startup or reset thus solving errata issue POR_E102.
-The device will no longer support the use of an external crystal oscillator but will still support external RC and CMOS oscillators
-Removed bits 6 and 7 from the XOSC0CN: External Oscillator Control Register, SFR Page 0x0, 0x10; SFR Address: 0x86

The changes to the datasheet are as follows:
-Updated ordering part numbers to revision C.
-Updated Section 1. Feature List, Figure 3.1 "Detailed EFM8LB1 Block Diagram" on page 8 to remove external oscillator input.
-Updated Section 3.4 Clocking to remove external crystal oscillator as clock source.
-Updated Section 4.1.8 External Oscillator from presenting specifications for crystal oscillators to present specifications for RC oscillators.

Note: After the effective date of the PRCN, Silicon Labs reserves the right not to accept orders for the old revision.

Reason for Change

Extend the availability of revision B for the BB3 products.

Original PRCN Change Reason:

This silicon change is to correct errata item POR_E102 which was a bug in the startup sequence of P0.3. See form, fit, function, quality, and reliability section below.

Impact on Form, Fit, Function, Quality, Reliability

The addendum does not add or change the impact on Form, Fit, Function, Quality, Reliability.

Original PRCN impact:

Systems that rely on an external crystal will need to re-architect their clocking structure to ensure revision C devices will function in the system. Systems that previously experienced a erroneous pull down on start up on P0.3 will no longer experience this on revision C devices.

Product Identification

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Existing Part #         Replacement Part #       DropInCompInd.
EFM8BB31F16A-B-4QFN24   EFM8BB31F16A-C-4QFN24  Yes
EFM8BB31F16A-B-4QFN24R  EFM8BB31F16A-C-4QFN24R Yes
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EFM8BB31F16A-B-5QFN32   EFM8BB31F16A-C-5QFN32   Yes
EFM8BB31F16A-B-5QFN32R  EFM8BB31F16A-C-5QFN32R  Yes
EFM8BB31F16G-B-QFN24    EFM8BB31F16G-C-QFN24    Yes
EFM8BB31F16G-B-QFN24R   EFM8BB31F16G-C-QFN24R   Yes
EFM8BB31F16G-B-QFN32    EFM8BB31F16G-C-QFN32    Yes
EFM8BB31F16G-B-QFN32R   EFM8BB31F16G-C-QFN32R   Yes
EFM8BB31F16G-B-QFP32    EFM8BB31F16G-C-QFP32    Yes
EFM8BB31F16G-B-QFP32R   EFM8BB31F16G-C-QFP32R   Yes
EFM8BB31F16G-B-QSOP24   EFM8BB31F16G-C-QSOP24   Yes
EFM8BB31F16G-B-QSOP24R  EFM8BB31F16G-C-QSOP24R  Yes
EFM8BB31F16I-B-4QFN24   EFM8BB31F16I-C-4QFN24   Yes
EFM8BB31F16I-B-4QFN24R  EFM8BB31F16I-C-4QFN24R  Yes
EFM8BB31F16I-B-5QFN32   EFM8BB31F16I-C-5QFN32   Yes
EFM8BB31F16I-B-5QFN32R  EFM8BB31F16I-C-5QFN32R  Yes
EFM8BB31F16I-B-QFN24    EFM8BB31F16I-C-QFN24    Yes
EFM8BB31F16I-B-QFN24R   EFM8BB31F16I-C-QFN24R   Yes
EFM8BB31F16I-B-QFN32    EFM8BB31F16I-C-QFN32    Yes
EFM8BB31F16I-B-QFN32R   EFM8BB31F16I-C-QFN32R   Yes
EFM8BB31F16I-B-QFP32    EFM8BB31F16I-C-QFP32    Yes
EFM8BB31F16I-B-QFP32R   EFM8BB31F16I-C-QFP32R   Yes
EFM8BB31F16I-B-QSOP24   EFM8BB31F16I-C-QSOP24   Yes
EFM8BB31F16I-B-QSOP24R  EFM8BB31F16I-C-QSOP24R  Yes
EFM8BB31F32A-B-4QFN24   EFM8BB31F32A-C-4QFN24   Yes
EFM8BB31F32A-B-4QFN24R  EFM8BB31F32A-C-4QFN24R  Yes
EFM8BB31F32A-B-5QFN32   EFM8BB31F32A-C-5QFN32   Yes
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EFM8BB31F32G-B-QFN24R   EFM8BB31F32G-C-QFN24R   Yes
EFM8BB31F32G-B-QFN32    EFM8BB31F32G-C-QFN32    Yes
EFM8BB31F32G-B-QFN32R   EFM8BB31F32G-C-QFN32R   Yes
EFM8BB31F32G-B-QFP32    EFM8BB31F32G-C-QFP32    Yes
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EFM8BB31F32G-B-QSOP24   EFM8BB31F32G-C-QSOP24   Yes
EFM8BB31F32G-B-QSOP24R  EFM8BB31F32G-C-QSOP24R  Yes
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EFM8BB31F32I-B-QFN32R   EFM8BB31F32I-C-QFN32R   Yes
EFM8BB31F32I-B-QFP32    EFM8BB31F32I-C-QFP32    Yes
EFM8BB31F32I-B-QFP32R   EFM8BB31F32I-C-QFP32R   Yes
EFM8BB31F32I-B-QSOP24   EFM8BB31F32I-C-QSOP24   Yes
EFM8BB31F32I-B-QSOP24R  EFM8BB31F32I-C-QSOP24R  Yes
EFM8BB31F64A-B-4QFN24   EFM8BB31F64A-C-4QFN24   Yes
EFM8BB31F64A-B-4QFN24R  EFM8BB31F64A-C-4QFN24R  Yes
EFM8BB31F64A-B-5QFN32   EFM8BB31F64A-C-5QFN32   Yes
EFM8BB31F64A-B-5QFN32R  EFM8BB31F64A-C-5QFN32R  Yes
EFM8BB31F64G-B-QFN24    EFM8BB31F64G-C-QFN24    Yes
EFM8BB31F64G-B-QFN24R   EFM8BB31F64G-C-QFN24R   Yes
EFM8BB31F64G-B-QFN32    EFM8BB31F64G-C-QFN32    Yes
EFM8BB31F64G-B-QFN32R   EFM8BB31F64G-C-QFN32R   Yes
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EFM8BB31F64G-B-QFP32R   EFM8BB31F64G-C-QFP32R   Yes
EFM8BB31F64G-B-QSOP24   EFM8BB31F64G-C-QSOP24   Yes
EFM8BB31F64G-B-QSOP24R  EFM8BB31F64G-C-QSOP24R  Yes
EFM8BB31F64I-B-4QFN24   EFM8BB31F64I-C-4QFN24   Yes
EFM8BB31F64I-B-4QFN24R  EFM8BB31F64I-C-4QFN24R  Yes
EFM8BB31F64I-B-5QFN32   EFM8BB31F64I-C-5QFN32   Yes
EFM8BB31F64I-B-5QFN32R  EFM8BB31F64I-C-5QFN32R  Yes
EFM8BB31F64I-B-QFN24    EFM8BB31F64I-C-QFN24    Yes
EFM8BB31F64I-B-QFN24R   EFM8BB31F64I-C-QFN24R   Yes
EFM8BB31F64I-B-QFN32    EFM8BB31F64I-C-QFN32    Yes
EFM8BB31F64I-B-QFN32R   EFM8BB31F64I-C-QFN32R   Yes
EFM8BB31F64I-B-QFP32    EFM8BB31F64I-C-QFP32
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EFM8BB31F64I-B-QFP32R  EFM8BB31F64I-C-QFP32R  Yes
EFM8BB31F64I-B-QSOP24  EFM8BB31F64I-C-QSOP24  Yes
EFM8BB31F64I-B-QSOP24R EFM8BB31F64I-C-QSOP24R Yes
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Kit Identification

Kits impacted by the above product are listed below.
Orders for the following obsolete kits will no longer be accepted.

Last Date of Unchanged Product: 12/31/2020

Qualification Samples

Available upon request

Customer Response

Lack of acknowledgment of the PCN within 30 days constitutes acceptance of the change, Ref. JEDEC-J-STD-046.

To request further data or inquire about this notification, please contact your Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at http://www.silabs.com.
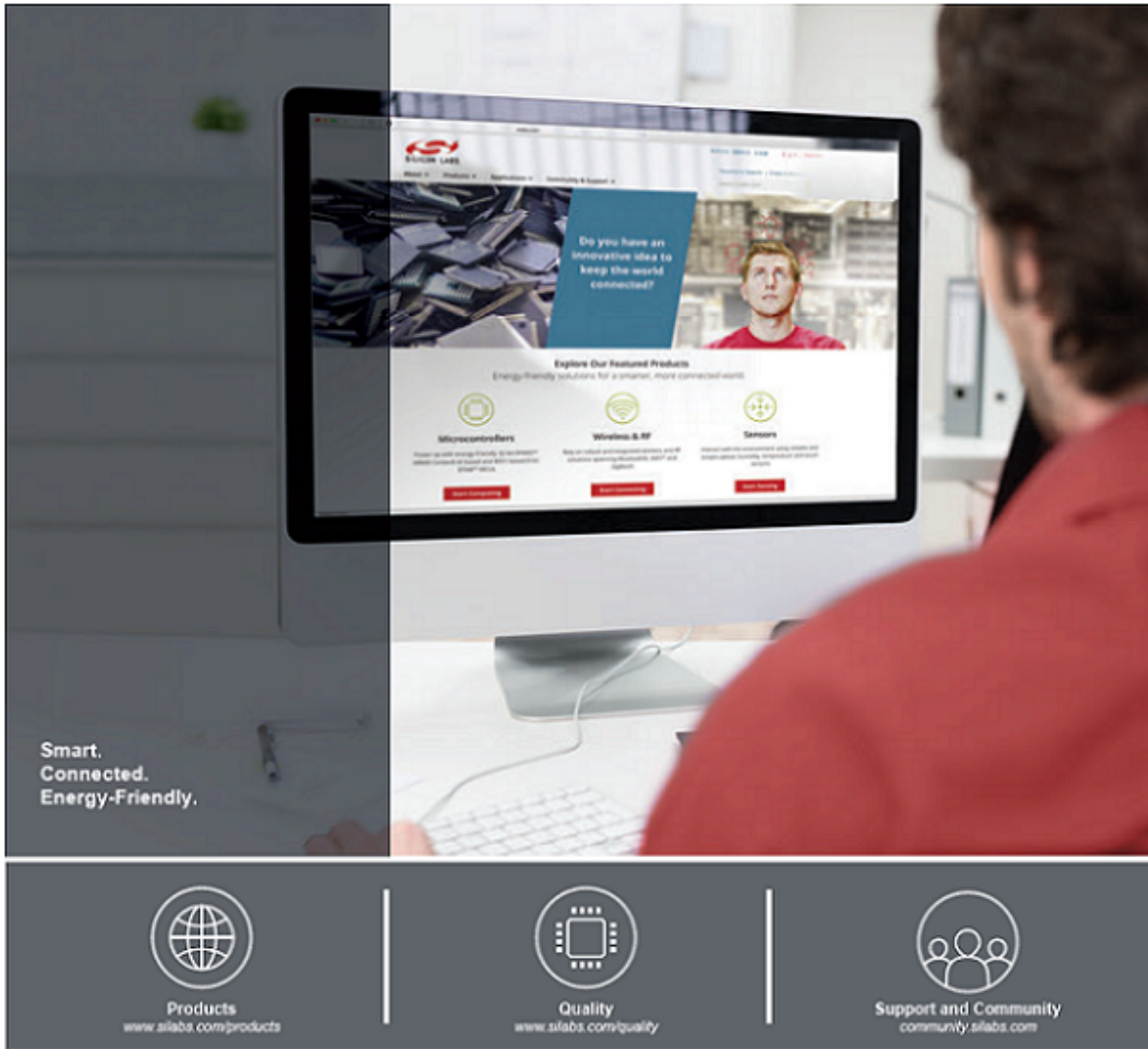
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