

# 2103301006 EFM8LB1x/BB3x/BB2x/SB10/UB10, CP2102N QFN 3x3 Additional Lead Frame Suppli

PCN Issue Date: Mar 30, 2021 Effective Date: Jul 06, 2021

PCN Type: Assembly

## **Description of Change**

Silicon Labs is pleased to announce the successful qualification of CWE lead frame for EFM8LB1x/BB3x/BB2x/SB10/UB10 and CP2102N, 3x3 QFN package devices.

Currently, EFM8LB1x/BB3x/BB2x/SB10/UB10 and CP2102N, 3x3 QFN package devices use Mitsui lead frame. Both Mitsui & CWE are qualified lead frame suppliers in ASECL.

There is no change between Mitsui and CWE lead frame in terms of material type, properties, dimensions, Assembly Process, Assembly Flow, etc.

As of the effective date of the PCN, Silicon Labs will continue to fulfill orders using the lead frames from both suppliers. The package qualification report is attached.

## **Reason for Change**

Capacity expansion

# Impact on Form, Fit, Function, Quality, Reliability

No impact on Form, Fit, Function, Quality, Reliability.

#### **Product Identification**

Existing Part # CP2102N-A02-GQFN20 CP2102N-A02-GQFN20R EFM8BB20F16G-C-QFN20 EFM8BB20F16G-C-QFN20R EFM8BB20F16I-C-QFN20 EFM8BB20F16I-C-QFN20R EFM8BB21F16A-C-QFN20 EFM8BB21F16A-C-QFN20R EFM8BB21F16G-C-QFN20 EFM8BB21F16G-C-QFN20R EFM8BB21F16I-C-QFN20 EFM8BB21F16I-C-QFN20R EFM8BB31F16G-B-QFN24 EFM8BB31F16G-B-QFN24R EFM8BB31F16G-C-QFN24 EFM8BB31F16G-C-QFN24R EFM8BB31F16G-D-QFN24 EFM8BB31F16G-D-QFN24R EFM8BB31F16I-B-QFN24 EFM8BB31F16I-B-QFN24R EFM8BB31F16I-C-QFN24

EFM8BB31F16I-C-QFN24R

EFM8BB31F16I-D-QFN24 EFM8BB31F16I-D-QFN24R EFM8BB31F32G-B-QFN24 EFM8BB31F32G-B-QFN24R

EFM8BB31F32G-B-QFN24R EFM8BB31F32G-C-QFN24

EFM8BB31F32G-C-QFN24R

EFM8BB31F32G-C-QFN24R EFM8BB31F32G-D-QFN24

EFM8BB31F32G-D-QFN24R

EFM8BB31F32I-C-QFN24

EFM8BB31F32I-C-QFN24R EFM8BB31F32I-D-QFN24

EFM8BB31F32I-D-QFN24R

EFM8BB31F64G-B-QFN24

EFM8BB31F64G-B-QFN24R

EFM8BB31F64G-C-QFN24

EFM8BB31F64G-C-QFN24R

EFM8BB31F64G-D-QFN24

EFM8BB31F64G-D-QFN24R

EFM8BB31F64I-B-QFN24

EFM8BB31F64I-B-QFN24R

EFM8BB31F64I-C-QFN24

EFM8BB31F64I-C-QFN24R

EFM8BB31F64I-D-QFN24

EFM8BB31F64I-D-QFN24R

EFM8LB10F16E-C-QFN24

EFM8LB10F16E-C-QFN24R

EFM8LB10F16ES0-C-QFN24

EFM8LB10F16ES0-C-QFN24R

EFM8LB10F16ES1-C-QFN24 EFM8LB10F16ES1-C-QFN24R

EFM8LB11F16E-C-QFN24

EFM8LB11F16E-C-QFN24R

EFM8LB11F16ES0-C-QFN24

EFM8LB11F16ES0-C-QFN24R

EFM8LB11F16ES1-C-QFN24

EFM8LB11F16ES1-C-QFN24R

EFM8LB11F32E-C-QFN24

EFM8LB11F32E-C-QFN24R

EFM8LB11F32ES0-C-QFN24

EFM8LB11F32ES0-C-QFN24R

EFM8LB11F32ES1-C-QFN24 EFM8LB11F32ES1-C-QFN24R

EFM8LB12F32E-C-QFN24

EFM8LB12F32E-C-QFN24R

EFM8LB12F32ES0-C-QFN24

EFM8LB12F32ES0-C-QFN24R

EFM8LB12F32ES1-C-QFN24

EFM8LB12F32ES1-C-QFN24R

EFM8LB12F64E-C-OFN24

EFM8LB12F64E-C-QFN24R EFM8LB12F64ES0-C-QFN24

EFM8LB12F64ES0-C-QFN24R

EFM8LB12F64ES1-C-QFN24

EFM8LB12F64ES1-C-QFN24R

EFM8LB12P\*F64EM2-C

EFM8LB12P\*F64EM2-CR

EFM8SB10F8A-A-QFN20

EFM8SB10F8A-A-QFN20R

EFM8UB10C\*F16GM-C EFM8UB10C\*F16GM-CR

EFM8UB10F16G-C

EFM8UB10F16G-C-QFN20

EFM8UB10F16G-C-QFN20R

EFM8UB10F16G-CR

EFM8UB10F8G-C-QFN20

EFM8UB10F8G-C-QFN20R

EFM8UB10P\*F16GM-C

EFM8UB10P\*F16GM-CR EFM8UB10P\*F8GM-C EFM8UB10P\*F8GM-CR

Last Date of Unchanged Product: Jul 06, 2021

## **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 <a href="http://www.silabs.com">http://www.silabs.com</a>.

Customers may approve early PCN acceptance by emailing approval, along with PCN # to PCNEarlyAcceptance@silabs.com

#### **User Registration**

Register today to create your account on Silabs.com. Your personalized profile allows you to receive technical document updates, new product announcements, "how-to" and design documents, product change notices (PCN) and other valuable content available only to registered users. <a href="http://www.silabs.com/profile">http://www.silabs.com/profile</a>

### **Qualification Data**

See appendices.

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A - Acc	celerated Environment Stress	Tests - 24-QFN-A	SECL assemb	oly			
Preconditioning	JA113		Q047255	0/77			
	MSL 2, 260°C	3 lots, N=>77	Q047254	0/77		3 lots	Pass
	85°C, 60%RH, 168 hr		Q047253	0/77		0/0	
Temp Cycle	JA104		Q047263	0/77	1		
	Cond C: -65°C to 150°C	3 lots, N=>77	Q047262	0/76	1	3 lots	Pass
	500 cycles		Q047261	0/77	1	0/0	
Test Group D - Ele	ctrical Verification						
ESD-CDM	AEC-Q100-011		0047005			1050 70	
		1 lot, N=>3	Q047095		4	1250 TC	Class C6

#### Notes:

## Qualification report for EFM8LB1x/BB3x

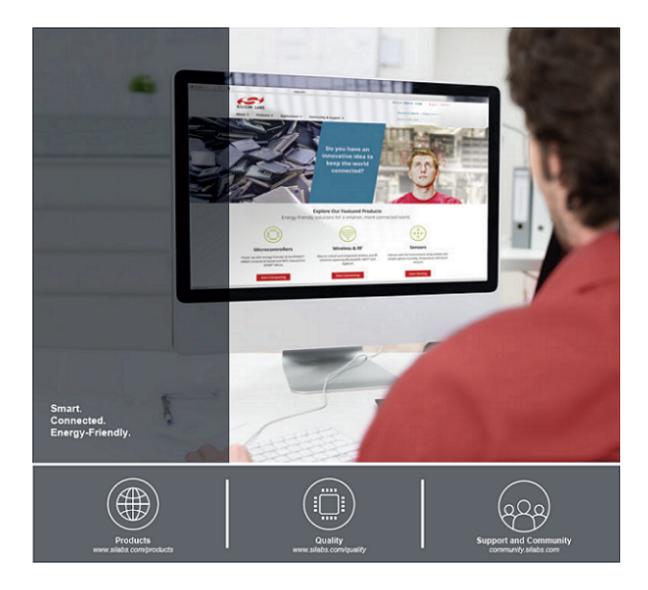
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A – Ac	celerated Environment Stres	s Tests					
Preconditioning	J-STD-020, JA113		Q047251	0/76			
	MSL2 260°C	3 lots, N=>77	Q047515	0/80			
	85°C / 60%RH / 168hr		Q047516	0/79		4 lots	Pass
			Q047517	0/79		0/314	
Temp Cycle	JA104		Q047252	0/76	1		
	Cond C: -65°C to 150°C	3 lots, N=>77	Q047519	0/80	1		
	500 cycles		Q047520	0/79	1	4 lots	Pass
	1.50		Q047521	0/79	-1	0/314	
Fest Group E – Ele	ectrical Verification						
ESD-CDM	AEC-Q100-011	-					
		1 lot, N=>3	Q047096		3	1250 TC	Class C6
		300000000000000000000000000000000000000	Q047175		2	750 TC	Class C5

#### Notes:

- 1. Parts are Pre-conditioned at MSL2/260°C
- 2. EFM8SB10x
- 3. EFM8BB2x

Qualification report for EFM8BB2x/UB10, CP2102N and EFM8SB10 (Automotive)

<sup>1.</sup> Parts are Pre-conditioned at MSL2/260°C



#### Disclaimer

Silicon Labs intends to provide customers with the latest, accurate, and in-depth documentation of all peripherals and modules available for system and software implementers using or intending to use the Silicon Labs products. Characterization data, available modules and peripherals, memory sizes and memory addresses refer to each specific device, and "Typical" parameters provided can and do vary in different applications. Application examples described herein are for illustrative purposes only. Silicon Labs reserves the right to make changes without further notice and limitation to product information, specifications, and descriptions herein, and does not give warranties as to the accuracy or completeness of the included information. Silicon Labs shall have no liability for the consequences of use of the information supplied herein. This document does not imply or express copyright licenses granted hereunder to design or fabricate any integrated circuits. The products are not designed or authorized to be used within any Life Support System without the specific written consent of Silicon Labs. A "Life Support System" is any product or system intended to support or sustain life and/or health, which, if it fails, can be reasonably expected to result in significant personal injury or death. Silicon Labs products are not designed or authorized for military applications. Silicon Labs products shall under no circumstances be used in weapons of mass destruction including (but not limited to) nuclear, biological or chemical weapons, or missiles capable of delivering such weapons.

#### **Trademark Information**

Silicon Laboratories Inc.®, Silicon Laboratories®, Silicon Labs®, SiLabs® and the Silicon Labs logo®, Bluegiga®, Bluegiga Logo®, Clockbuilder®, CMEMS®, DSPLL®, EFM®, EFM32®, EFR, Ember®, Energy Micro, Energy Micro logo and combinations thereof, "the world's most energy friendly microcontrollers", Ember®, EZLink®, EZRadio®, EZRadioPRO®, Gecko®, ISOmodem®, Micrium, Precision32®, ProSLIC®, Simplicity Studio®, SiPHY®, Telegesis, the Telegesis Logo®, USBXpress®, Zentri and others are trademarks or registered trademarks of Silicon Labs. ARM, CORTEX, Cortex-M3 and THUMB are trademarks or registered trademarks of ARM Holdings. Keil is a registered trademark of ARM Limited. All other products or brand names mentioned herein are trademarks of their respective holders.



Silicon Laboratories Inc. 400 West Cesar Chavez Austin, TX 78701