



# 171005146 Updated Errata for Happy Gecko Products

**PCN Issue Date:** 10/5/2017

**Effective Date:** 1/11/2018

**PCN Type:** Other

## Description of Change

Silicon Labs is announcing updated errata for EFM32HGXXX and EZR32HGXXX product families.

EFM32HGXXX and EZR32HGXXX Errata documents have been updated to v1.30.

Both documents modified EMU\_110 and added BOOT\_E102. The EZR32HG Errata also added BOOT\_E103. See Errata for complete details at [silabs.com](http://silabs.com).

## Reason for Change

New and updated errata.

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

No impact on form, fit, quality, or reliability.

BOOT\_E102 affects functionality by adding crystal-less USB support for the version 2.06 production bootloader.

## Product Identification

EZR32HG220F32R55G-B0	EZR32HG220F32R55G-B0R
EZR32HG220F32R60G-B0	EZR32HG220F32R60G-B0R
EZR32HG220F32R61G-B0	EZR32HG220F32R61G-B0R
EZR32HG220F32R63G-B0	EZR32HG220F32R63G-B0R
EZR32HG220F32R67G-B0	EZR32HG220F32R67G-B0R
EZR32HG220F32R68G-B0	EZR32HG220F32R68G-B0R
EZR32HG220F32R69G-B0	EZR32HG220F32R69G-B0R
EZR32HG220F64R55G-B0	EZR32HG220F64R55G-B0R
EZR32HG220F64R60G-B0	EZR32HG220F64R60G-B0R
EZR32HG220F64R61G-B0	EZR32HG220F64R61G-B0R
EZR32HG220F64R63G-B0	EZR32HG220F64R63G-B0R
EZR32HG220F64R67G-B0	EZR32HG220F64R67G-B0R
EZR32HG220F64R68G-B0	EZR32HG220F64R68G-B0R
EZR32HG220F64R69G-B0	EZR32HG220F64R69G-B0R
EZR32HG320F32R55G-B0	EZR32HG320F32R55G-B0R
EZR32HG320F32R60G-B0	EZR32HG320F32R60G-B0R
EZR32HG320F32R61G-B0	EZR32HG320F32R61G-B0R
EZR32HG320F32R63G-B0	EZR32HG320F32R63G-B0R
EZR32HG320F32R67G-B0	EZR32HG320F32R67G-B0R
EZR32HG320F32R68G-B0	EZR32HG320F32R68G-B0R
EZR32HG320F32R69G-B0	EZR32HG320F32R69G-B0R
EZR32HG320F64R55G-B0	EZR32HG320F64R55G-B0R
EZR32HG320F64R60G-B0	EZR32HG320F64R60G-B0R
EZR32HG320F64R61G-B0	EZR32HG320F64R61G-B0R
EZR32HG320F64R63G-B0	EZR32HG320F64R63G-B0R
EZR32HG320F64R67G-B0	EZR32HG320F64R67G-B0R
EZR32HG320F64R68G-B0	EZR32HG320F64R68G-B0R
EZR32HG320F64R69G-B0	EZR32HG320F64R69G-B0R
EFM32HG108F32G-B-QFN24	EFM32HG108F32G-B-QFN24R

EFM32HG108F64G-B-QFN24 EFM32HG108F64G-B-QFN24R  
EFM32HG110F32G-B-QFN24 EFM32HG110F32G-B-QFN24R  
EFM32HG110F64G-B-QFN24 EFM32HG110F64G-B-QFN24R  
EFM32HG210F32G-B-QFN32 EFM32HG210F32G-B-QFN32R  
EFM32HG210F64G-B-QFN32 EFM32HG210F64G-B-QFN32R  
EFM32HG222F32G-B-QFP48 EFM32HG222F32G-B-QFP48R  
EFM32HG222F64G-B-QFP48 EFM32HG222F64G-B-QFP48R  
EFM32HG308F32G-B-QFN24 EFM32HG308F32G-B-QFN24R  
EFM32HG308F64G-B-QFN24 EFM32HG308F64G-B-QFN24R  
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EFM32HG309F64G-B-QFN24 EFM32HG309F64G-B-QFN24R  
EFM32HG310F32G-B-QFN32 EFM32HG310F32G-B-QFN32R  
EFM32HG310F64G-B-QFN32 EFM32HG310F64G-B-QFN32R  
EFM32HG321F32G-B-QFP48 EFM32HG321F32G-B-QFP48R  
EFM32HG321F64G-B-QFP48 EFM32HG321F64G-B-QFP48R  
EFM32HG322F32G-B-QFP48 EFM32HG322F32G-B-QFP48R  
EFM32HG322F64G-B-QFP48 EFM32HG322F64G-B-QFP48R  
EFM32HG350F32G-B-CSP36 EFM32HG350F32G-B-CSP36R  
EFM32HG350F64G-B-CSP36 EFM32HG350F64G-B-CSP36R

**Last Date of Unchanged Product:** 1/11/2018

### Qualification Samples

Samples available upon request.

**Specific conditions of acceptance of this change will be considered on a case by case basis if written notice is submitted within 30 days of this notice. To request further data or inquire about this notification, please contact your local Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at <http://www.silabs.com>.**

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**Date:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Email your early Acceptance approval to:** PCNEarlyAcceptance@silabs.com

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### Qualification Data

See Appendix for qualification data.

## EFM32HG\* Qualification Report



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Part Rev A1, TSMC Fabrication, ASEKR Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A - Accelerated Environment Stress Tests - CSP - ASECL							
HAST	JA110 130°C, 85%RH Vcc=3.8V, 96 hours	3 lots, N=>25	Q37113 Q37378 Q37419 Q37744	0/25 0/26 1/26 0/20	1 1 1 1	4 lots 1/97	Pass
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>25	Q37114 Q37377 Q37418	0/27 0/26 0/27	1 1 1	3 lots 0/80	Pass
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q37111 Q37374 Q37415	0/27 0/25 0/27		3 lots 0/79	Pass
Test Group A - Accelerated Environment Stress Tests - QFP							
HAST	JA110 130°C, 85%RH Vcc=3.8V, 96 hours	3 lots, N=>25	Q37011 Q37006 Q36990	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass
uHAST	JA118 130°C, 85%RH 96 hours	3 lots, N=>25	Q37014 Q37009 Q37005	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>25	Q37013 Q37008 Q37000	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q37012 Q37007 Q36999	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass
Test Group A - Accelerated Environment Stress Tests - QFN							
HAST	JA110 130°C, 85%RH Vcc=3.8V, 96 hours	3 lots, N=>25	Q37246 Q37242 Q36986	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass
uHAST	JA118 130°C, 85%RH 96 hours	3 lots, N=>25	Q37247 Q37243 Q36987	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>25	Q37248 Q37244 Q36988	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q36989 Q37245 Q37249	0/30 0/30 0/30	2 2 2	3 lots 0/90	Pass

Approved by: Kathy Torres

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Prepared on: 27-Oct-2015

## EFM32HG\* Qualification Report



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Part Rev A1, TSMC Fabrication, ASEKR Assembly except as noted							
Test Group B - Accelerated Lifetime Simulation Tests							
HTOL	JA108		Q36985	0/80			
	125°C, Dynamic	3 lots, N=>77	Q34509	0/80		3 lots	Pass
	Vcc=3.8V, 1000 hours		Q35572	0/80		0/240	
LTOL	JA108						
	-10°C, Dynamic	1 lot, N=>32	Q34510	0/40		1 lots	Pass
	Vcc=3.8V, 1000 hours					0/40	
ELFR	JA108		Q36939	0/508			
	125°C, Dynamic	3 lots, N=>500	Q34886	0/520		3 lots	Pass
	Vcc=3.8V, 48 hours		Q34894	0/503		0/1531	
HVM HTDR	JESD22-A117		Q34896	0/39			
	150°C, 1000 hours	3 lots, N=>39	Q34888	0/40		3 lots	Pass
			Q34513	0/39		0/118	
HVM LTDR	JESD22-A117		Q34895	0/40			
	25°C, 500 hours	3 lots, N=>38	Q34887	0/40		3 lots	Pass
			Q34514	0/39		0/119	
Test Group E - Electrical Verification							
ESD-HBM	JA114	1 lot, N=>3	Q37025				±2500 V
ESD-CDM	JC101	1 lot, N=>3	Q37115		3		±500 V
			Q36943		4		±1500 V
			Q36934		5		±1500 V
			Q37105		6		±1500 V
Latch Up	JESD78	1 lot, N=>3	Q37022	85 °C			±150mA
	Overvoltage = 3.8V		Q37020	25 °C			±200mA

### Notes:

1. Parts are Pre-conditioned at MSL1/260°C
2. Parts are Pre-conditioned at MSL3/260°C
3. WLCSP Package
4. 7x7 48 QFN
5. 6x6 32 QFN
6. 5x5 24 QFN

This report applies to the following part numbers:		
EFM32HG108F32G-B-QFN24	EFM32HG222F64G-B-QFP48	EFM32HG321F32G-B-QFP48
EFM32HG108F64G-B-QFN24	EFM32HG308F32G-B-QFN24	EFM32HG321F64G-B-QFP48
EFM32HG110F32G-B-QFN24	EFM32HG308F64G-B-QFN24	EFM32HG322F32G-B-QFP48
EFM32HG110F64G-B-QFN24	EFM32HG309F32G-B-QFN24	EFM32HG322F64G-B-QFP48
EFM32HG210F32G-B-QFN32	EFM32HG309F64G-B-QFN24	EFM32HG350F32G-B-CSP36
EFM32HG210F64G-B-QFN32	EFM32HG310F32G-B-QFN32	EFM32HG350F64G-B-CSP36
EFM32HG222F32G-B-QFP48	EFM32HG310F64G-B-QFN32	

Approved by: Kathy Torres

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Prepared on: 27-Oct-2015

## EZR32HG Qualification Report



W7101F1 - Product Qualification Report Record Rev. H

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### Part Rev B0, TSMC Fabrication, ASECL Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A – Accelerated Environment Stress Tests							
HAST	JA110 130°C, 85%RH Vcc=5.5V, 96 hours	3 lots, N=>25	Q038335	0/28	1		Pass
			Q038554	1/30	1		
			Q038847	0/40	1	4 lots	
			Q038585	0/30	1	1/128	
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>25	Q038337	0/33	1		Pass
			Q038556	0/30	1	3 lots	
			Q038587	0/30	1	0/93	
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q038336	0/32	1		Pass
			Q038555	0/30	1	3 lots	
			Q038586	0/30	1	0/92	
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108 T <sub>J</sub> ≥ 125°C, Dynamic Vcc=5.5V, 1000 hours	3 lots, N=>77	Q034509	0/80	2		Pass
			Q035572	0/80	2		
			Q036985	0/80	2		
			Q035137	0/85	3, 4		
			Q035721	0/81	3, 4	6 lots	
			Q035945	0/83	3, 4	0/489	
LTOL	JA108 T <sub>A</sub> = -10°C, Dynamic Vcc=5.5V, 1000 hours	1 lot, N=>32	Q034510	0/40	2		Pass
			Q030413	0/80	3, 4	2 lots 0/120	
ELFR	JA108 T <sub>J</sub> ≥ 125°C, Dynamic Vcc=5.5V, 48 hours	3 lots, N=>500	Q036939	0/508	2		Pass
			Q037580	0/509	2		
			Q038094	0/511	2		
			Q035671	0/818	3, 4		
			Q035612	0/814	3, 4	6 lots	
			Q035944	0/812	3, 4	0/3972	
Test Group E – Electrical Verification							
ESD-HBM	JDS-001	1 lot, N=>3	Q038096		2		Class 2
			Q035921		3		Class 2
ESD-CDM	JC101	1 lot, N=>3	Q038467				Class II
Latch Up	JESD78 ±100mA Overvoltage = 8.25V	1 lot, N=>3	Q038097	85 °C	2		Pass
			Q035946	125 °C	3, 5		

Approved by: J. Engel

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Prepared on: 31-May-2016

## EZR32HG Qualification Report



W7101F1 - Product Qualification Report Record Rev. H

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### Part Rev B0, TSMC Fabrication, ASECL Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
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#### Notes:

1. Parts are Pre-conditioned at MSL3/260°C
2. Performed on MCU die
3. Performed on RF die
4. Vcc = 3.6V
5. Over-voltage applied 5.7V

#### This report applies to the following part numbers:

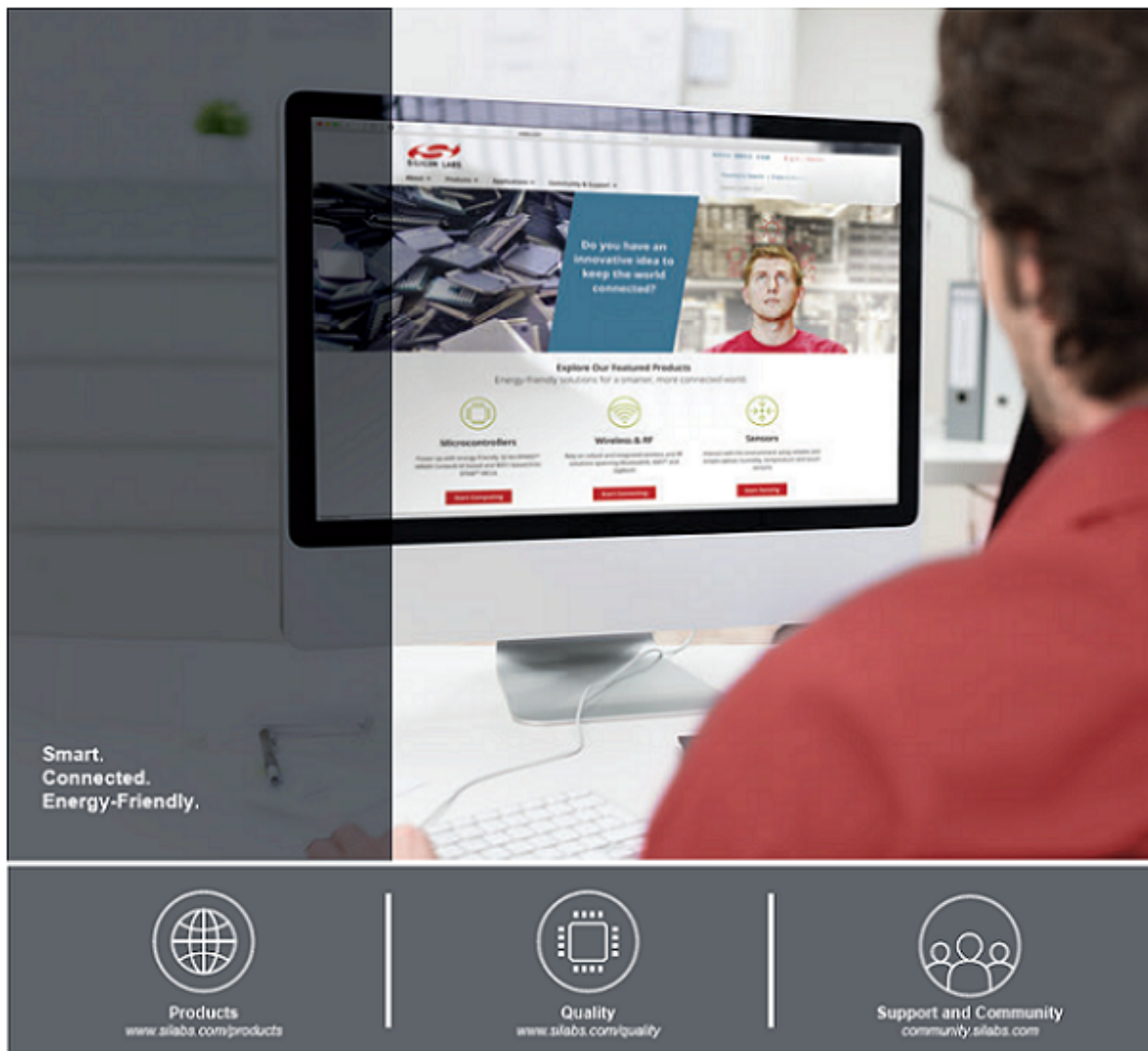
EZR32HG220F32R55G-B0	EZR32HG320F32R55G-B0
EZR32HG220F32R60G-B0	EZR32HG320F32R60G-B0
EZR32HG220F32R61G-B0	EZR32HG320F32R61G-B0
EZR32HG220F32R63G-B0	EZR32HG320F32R63G-B0
EZR32HG220F32R67G-B0	EZR32HG320F32R67G-B0
EZR32HG220F32R68G-B0	EZR32HG320F32R68G-B0
EZR32HG220F32R69G-B0	EZR32HG320F32R69G-B0
EZR32HG220F64R55G-B0	EZR32HG320F64R55G-B0
EZR32HG220F64R60G-B0	EZR32HG320F64R60G-B0
EZR32HG220F64R61G-B0	EZR32HG320F64R61G-B0
EZR32HG220F64R63G-B0	EZR32HG320F64R63G-B0
EZR32HG220F64R67G-B0	EZR32HG320F64R67G-B0
EZR32HG220F64R68G-B0	EZR32HG320F64R68G-B0
EZR32HG220F64R69G-B0	EZR32HG320F64R69G-B0
EZR32HG220F64R61SFG-B0	EZR32HG220F64R68SFG-B0

Approved by: J. Engel

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Prepared on: 31-May-2016





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