



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.

<http://www.silabs.com/profile>

Bulletin Date: 7/8/2016		Bulletin Effective Date: 7/8/2016			
Title: EFM32PG1 Pearl Gecko and EFM32JG1 Jade Gecko Revision C0					
Bulletin Details					
Description:					
Silicon Labs is pleased to announce product revision C of the EFM32PG1 Pearl Gecko and EFM32JG1 Jade Gecko 32-bit MCU families. After the effective date of this PCN, Silicon Labs plans to deliver Revision C for customers ordering Revision B. Datasheets, reference manuals, and errata have been updated for these products. The new revision is a pin-compatible replacement for the previous revision devices. In addition, Revision C introduces new extended temperature grade OPNs.					
Please see attached Qualification Report in the Appendix.					
The datasheets are updated to version 0.95 and the reference manuals are updated to version 0.6. The Revision C errata documents and updated Errata History documents are also available. Revision C eliminates the following errata in revision B:					
Errata #	Designator	Title/Problem	Workaround Exists	Affected Revision	Fixed Revision
1	CUR_E201	EM2 and EM3 Current Consumption	No	B	Specifications updated in revision 0.95 of the Data Sheet to match the measured values.
2	CUR_E202	EM2/3 Current Consumption at Cold Temperatures	No	B	B, date code 1547 (November 16, 2015)
3	GPIO_E201	GPIO Default Slew Rate	Yes	B	B, date code 1603 (January 18, 2016)
4	DCDC_E201	DCDC Stops Regulating During a Fast EM0/1 to EM2/3/4H Transition	Yes	B	C
Reason:					
Revision C is the full production (FP) version of all OPNs in the EFM32PG1 and EFM32JG1 families.					
Product Identification:					
Affected Revision B0 OPN			New Revision C0 OPN		
EFM32PG1B200F256GM48-B0			EFM32PG1B200F256GM48-C0		
EFM32PG1B200F128GM48-B0			EFM32PG1B200F128GM48-C0		
EFM32PG1B200F256GM32-B0			EFM32PG1B200F256GM32-C0		
EFM32PG1B200F128GM32-B0			EFM32PG1B200F128GM32-C0		



Bulletin #1607081

EFM32PG1B100F256GM32-B0	EFM32PG1B100F256GM32-C0
EFM32PG1B100F128GM32-B0	EFM32PG1B100F128GM32-C0
EFM32JG1B200F256GM48-B0	EFM32JG1B200F256GM48-C0
EFM32JG1B200F128GM48-B0	EFM32JG1B200F128GM48-C0
EFM32JG1B200F256GM32-B0	EFM32JG1B200F256GM32-C0
EFM32JG1B200F128GM32-B0	EFM32JG1B200F128GM32-C0
EFM32JG1B100F256GM32-B0	EFM32JG1B100F256GM32-C0
EFM32JG1B100F128GM32-B0	EFM32JG1B100F128GM32-C0
EFM32PG1B200F256GM48-B0R	EFM32PG1B200F256GM48-C0R
EFM32PG1B200F128GM48-B0R	EFM32PG1B200F128GM48-C0R
EFM32PG1B200F256GM32-B0R	EFM32PG1B200F256GM32-C0R
EFM32PG1B200F128GM32-B0R	EFM32PG1B200F128GM32-C0R
EFM32PG1B100F256GM32-B0R	EFM32PG1B100F256GM32-C0R
EFM32PG1B100F128GM32-B0R	EFM32PG1B100F128GM32-C0R
EFM32JG1B200F256GM48-B0R	EFM32JG1B200F256GM48-C0R
EFM32JG1B200F128GM48-B0R	EFM32JG1B200F128GM48-C0R
EFM32JG1B200F256GM32-B0R	EFM32JG1B200F256GM32-C0R
EFM32JG1B200F128GM32-B0R	EFM32JG1B200F128GM32-C0R
EFM32JG1B100F256GM32-B0R	EFM32JG1B100F256GM32-C0R
EFM32JG1B100F128GM32-B0R	EFM32JG1B100F128GM32-C0R

This change is considered a minor change which does not affect form, fit, function, quality, or reliability. The information is being provided as a customer courtesy.

Please contact your local Silicon Labs sales representative with any questions about this notification. A list of Silicon Labs sales representatives may be found at www.silabs.com

Customer Actions Needed:

Please qualify and use Rev C0 for any future needs. Revision B0 OPNs listed above are engineering samples and should not be used for Production.

**EFM32PG1BXXX and EFM32JG1BXXX Rev C0
Qualification Report**



The information contained in this document is PROPRIETARY to Silicon Laboratories, Inc. and shall not be reproduced or used in part or whole without Silicon Laboratories' written consent. The document is uncontrolled if printed or electronically saved.

Part Rev C0, TSMC Fabrication, SPIL Assembly							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A – Accelerated Environment Stress Tests - 7x7 QFN							
HAST	JA110 130°C, 85%RH Vcc=3.8V, 96 hours	3 lots, N=>25	Q038584	0/43	1	3 lots 0/96	Pass
			Q038040	0/28	1		
			Q037588	0/25	1		
UHAST	JA110 130°C, 85%RH Vcc=3.8V, 96 hours	3 lots, N=>25	Q038123	0/28	1	3 lots 0/83	Pass
			Q038039	0/28	1		
			Q037724	0/27	1		
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>25	Q037586	0/25	1	3 lots 0/80	Pass
			Q038041	0/28	1		
			Q038121	0/27	1		
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q038038	0/28	1	3 lots 0/81	Pass
			Q038124	0/28	1		
			Q037590	0/25	1		
Test Group A – Accelerated Environment Stress Tests - 5x5 QFN							
HAST	JA110 130°C, 85%RH Vcc=3.8V, 96 hours	3 lots, N=>25	Q038584	0/43	1	3 lots 0/96	Pass
			Q038040	0/28	1		
			Q037588	0/25	1		
UHAST	JA110 130°C, 85%RH Vcc=3.8V, 96 hours	3 lots, N=>25	Q038014	0/35	1	3 lots 0/97	Pass
			Q038013	0/35	1		
			Q037772	0/27	1		
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>25	Q037776	0/27	1	3 lots 0/97	Pass
			Q038010	0/35	1		
			Q038009	0/35	1		
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q038012	0/35	1	3 lots 0/97	Pass
			Q038011	0/35	1		
			Q037774	0/27	1		
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108 T _j ≥ 125°C, Dynamic Vcc=3.8V, 1000 hours	3 lots, N=>77	Q038136	0/80	4 lots 0/290	Pass	
			Q038102	0/53			
			Q037998	0/78			
			Q037622	0/79			
LTOL	JA108 T _A = -10°C, Dynamic Vcc=3.8V, 1000 hours	1 lot, N=>32	Q037624	0/40	1 lots 0/40	Pass	
ELFR	JA108 T _j ≥ 125°C, Dynamic Vcc=3.8V, 48 hours	3 lots, N=>500	Q038755	0/501	4 lots 0/2021	Pass	
			Q037570	0/508			
			Q037999	0/507			
			Q038137	0/505			

Approved by: K. Torres

1 of 2

Prepared on: 8 June 2016

**EFM32PG1BXXX and EFM32JG1BXXX Rev C0
Qualification Report**



The information contained in this document is PROPRIETARY to Silicon Laboratories, Inc. and shall not be reproduced or used in part or whole without Silicon Laboratories' written consent. The document is uncontrolled if printed or electronically saved.

Part Rev C0, TSMC Fabrication, SPIL Assembly							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
NVM Endurance, Retention and Operating Life	JESD22-A117 25°C 500 hours	3 lots, N=>39	Q038148	0/40	2	3 lots 0/120	Pass
			Q038147	0/40	2		
			Q037725	0/40	2		
NVM Endurance, Retention and Operating Life	JESD22-A117 125°C 1000 hours	3 lots, N=>39	Q038066	0/40	3	4 lots 1/159	Pass
			Q038028	0/40	3		
			Q038024	1/39	3, 4		
			Q037652	0/40	3		
Test Group E – Electrical Verification							
ESD-HBM	JA114	1 lot, N=>3	Q038744				Class 2
ESD-CDM	JC101	1 lot, N=>3	Q039297		5		Class C3 Class C3
			Q039296		6		
Latch Up	JESD78 ±100mA	1 lot, N=>3	Q039298	25 °C	5		Pass
			Q039300	25 °C	6		
Latch Up	JESD78 ±100mA	1 lot, N=>3	Q039299	125 °C	5		Pass
			Q039301	125 °C	6		

Notes:

- Parts are Pre-conditioned at MSL2/260°C
- Preconditioned with 10K write/erase cycles at 25°C
- Preconditioned with 10K write/erase cycles at 125°C
- Failure analysis on the failure was inconclusive. An additional 40 units were stressed from the same wafer lot (Q038028) to reduce the LTPD% below the requirement. LTPD% = 5.76 at 90% confidence with 0 fails and a sample size =40. LTPD% = 4.80 at 90% confidence with 1 failure and a sample size = 80.
- Results for the 7x7 QFN Package
- Results for the 5x5 package

This report applies to the following part numbers:		
EFM32PG1B100F128GM32-C0	EFM32PG1B200F256GM48-C0	EFM32JG1B200F128GM32-C0
EFM32PG1B100F256GM32-C0	EFM32PG1B200F256IM32-C0	EFM32JG1B200F128GM48-C0
EFM32PG1B100F256IM32-C0	EFM32PG1B200F256IM48-C0	EFM32JG1B200F256GM32-C0
EFM32PG1B200F128GM32-C0	EFM32JG1B100F128GM32-C0	EFM32JG1B200F256GM48-C0
EFM32PG1B200F128GM48-C0	EFM32JG1B100F256GM32-C0	EFM32JG1B200F256IM32-C0
EFM32PG1B200F256GM32-C0	EFM32JG1B100F256IM32-C0	EFM32JG1B200F256IM48-C0