180605311 Change of Substrate Core Material, Si504x

PCN Issue Date: 6/5/2018 **Effective Date:** 9/11/2018

PCN Type: Assembly

Description of Change

Silicon Labs is pleased to announce a change of substrate core material from HL832NX to HL832NX(A). HL832NX(A) type is an improved version and a direct substitute of HL832NX type in terms of better peel strength, better lamination windows and lower water absorption rate. This change will also ensure long term continuity of supply.

There is no change to trace design, substrate construction and appearance.

As of the effective date of the PCN, Silicon Labs will continue to fulfill orders using both substrate core material types.

The package qualification report is attached.

Reason for Change

For production continuity and better performance.

Impact on Form, Fit, Function, Quality, Reliability

There is no change on form, fit, function, quality & reliability of this product

Product Identification

```
SI5040-D-GM
SI5040-D-GMR
SI5040-D-ZM2
SI5040-D-ZM2R
SI5040-D-ZM3
SI5040-D-ZM3R
SI5040-D-ZM6
SI5040-D-ZM6R
SI5040-D-ZM7
SI5040-D-ZM7R
SI5041-D-ZM1
SI5041-D-ZM1R
```

Last Date of Unchanged Product: 9/11/2018

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.

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. **http://www.silabs.com/profile**

Qualification Data

Please see below qualification reports.

SILICON LABS

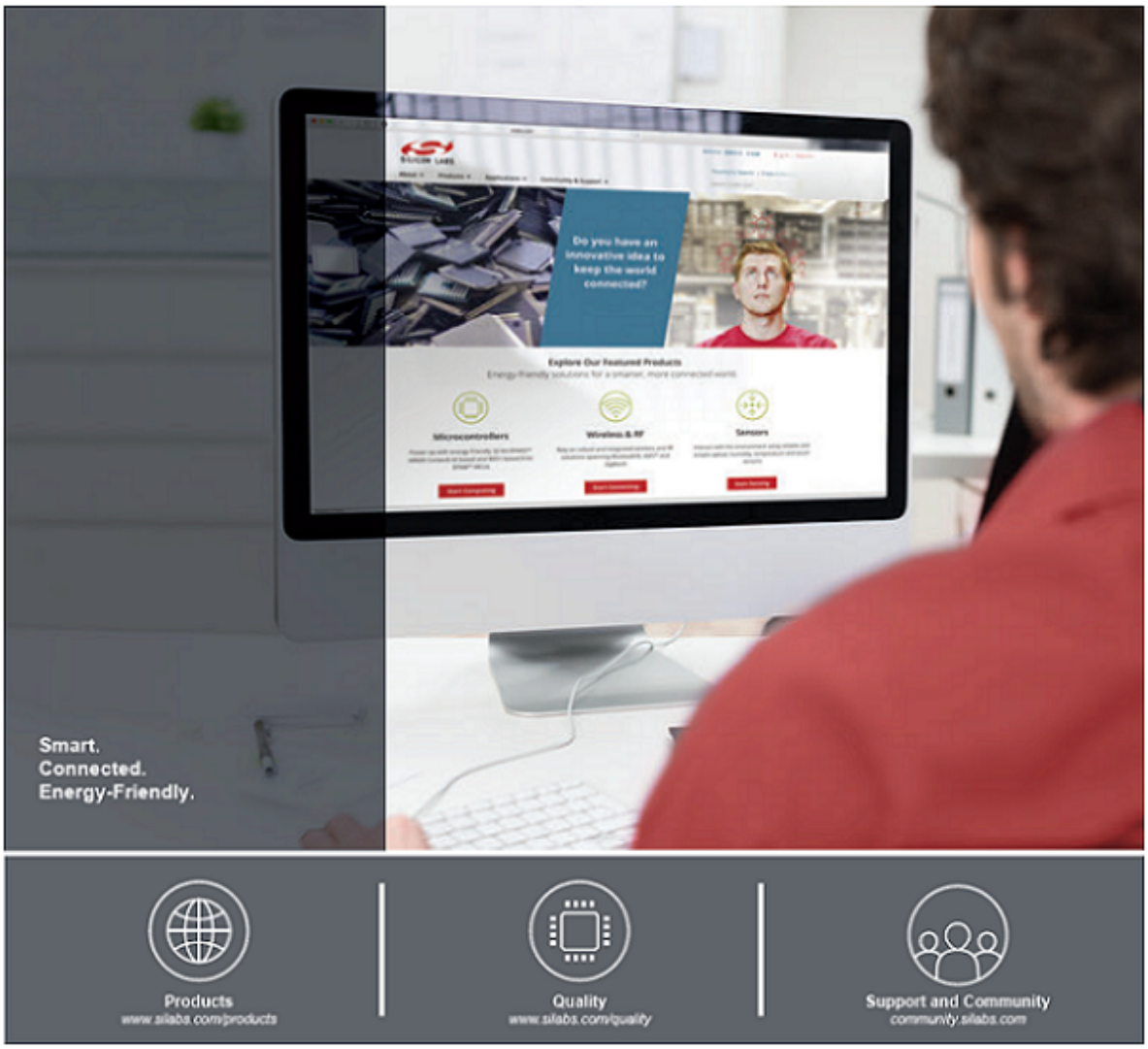
Si5040/41 Qualification Report

Part Rev E, TSMC Fabrication, SPIL 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		Q042554	0/25	1		
	130°C, 85%RH	3 lots, N=>25	Q042555	0/24	1	3 lots	Pass
	Vcc=1.8V, 96 hours		Q042556	0/25	1	0/74	
Temp Cycle	JA104		Q042550	0/25	1		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q042551	0/24	1	3 lots	Pass
	500 cycles		Q042552	0/25	1	0/74	
HTSL	JA103		Q025275	0/80	1, 2		
	150°C, 1000hr	3 lots, N=>25	Q025709	0/80	1, 2	3 lots	Pass
			Q025710	0/80	1, 2	0/240	
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108		Q025931	0/78	3		
	T_J ≥ 125°C, Dynamic	3 lots, N=>77	Q025932	0/80	3	3 lots	Pass
	Vcc=1.8V, 1000 hours		Q026734	0/80	3	0/238	
LTOL	JA108						
	T_A = -10°C, Dynamic	1 lot, N=>32	Q026576	0/80	3	1 lots	Pass
	Vcc=1.8V, 1000 hours					0/80	
ELFR	JA108		Q025707	0/500	3		
	T_J ≥ 125°C, Dynamic	3 lots, N=>500	Q025708	0/500	3	3 lots	Pass
	Vcc=1.8V, 48 hours		Q026872	0/500	3	0/1500	
Test Group E – Electrical Verification							
ESD-HBM	JA114	1 lot, N=>3	Q025142		3	2.5 kV	Class 2
ESD-CDM	JESD22-C101	1 lot, N=>3	Q025276		3	1000 V	Class IV
Latch Up	JESD78 ±200mA Overvoltage = 5.1975V	1 lot, N=>3	Q025277	70 °C	3		Pass

Notes:
1. Parts are Pre-conditioned at MSL3/260°C
2. Leveraged package family qualification data
3. Leveraged die family qualification data

This report applies to the following part numbers:				
Si5040-D-GM	Si5040-D-GMR	Si5040-D-ZM2	Si5040-D-ZM2R	Si5040-D-ZM3
Si5040-D-ZM3R	Si5040-D-ZM6	Si5040-D-ZM6R	Si5040-D-ZM7	Si5040-D-ZM7R
Si5041-D-ZM1	Si5041-D-ZM1R			

Prepared on: 23-May-2018 by N. Arguello



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

http://www.silabs.com