190730581 Si720x Datasheet Update, Specification Changes, and New OPN Release

PCN Issue Date: 7/30/2019 **Effective Date:** 11/5/2019

PCN Type: Datasheet

Description of Change

Silicon Labs is pleased to announce the release of additional part number for the Si720x family. This release is accompanied by the release of Datasheet version 1.1. Additionally specific OPNs in the Si720x family have a few major specification changes that are listed below.

Additional part numbers include:
SI7201-B-10-IV
SI7201-B-12-IV
SI7201-B-20-IV
SI7201-B-21-IV
SI7201-B-22-IV
SI7201-B-30-IV
SI7201-B-31-IV
SI7201-B-32-IV
SI7201-B-40-IV
SI7201-B-41-IV
Si7201-B-80-FV
Si7201-B-81-FV
Si7201-B-82-FV
Si7201-B-83-IV
Si7201-B-84-IV
Si7201-B-85-IV
Si7201-B-86-IV
Si7201-B-87-IV

Datasheet changes are as follows:
-Addition of the above OPNs to the Ordering Table
-Added Brp and Bop typical numbers for all Si720x parts
-Changed sleep time to sample frequency, to convert between the two sample frequency = 1/sleep time
-Rounded all magnetic specs to 1 decimal place instead of 2, any maximum specifications were rounded up and minimum specification were rounded down
-Corrected Si7201-B-03-IV(R) Bop max from 0.9mT to 2.8mT
-Corrected Si7201-B-03-IV(R) Brp min from 0.2mT to 1.1mT
-Corrected Si7201-B-03-IV(R) hysteresis 0.2mT to 0.6mT
-Corrected Si7201-B-09-IB(R) Bop max from 1.4mT to 2.3mT
-Corrected Si7201-B-09-IB(R) sleep time from 200ms to 50ms (20Hz)
-Corrected Si7201-B-09-IB(R) Brp min from 0.9mT to 0.8mT
-Corrected Si7201-B-09-IV Typical Idd to 1.2 uA
-Corrected Si7201-B-11-IB(R) Bop max from 0.9mT to 2.8mT
-Corrected Si7201-B-11-IB(R) Bop max from 0.2mT to 1.1mT
-Corrected Si7201-B-11-IB(R) hysteresis from 0.2mT to 0.6mT
-Corrected Si7201-B-11-IB sample rate to 8000 Hz
-Corrected Si7201-B-11-IB typical Idd to 421 uA
-Corrected Si7201-B-11-IB Vdd range to 1.7V to 5.5V
-Corrected Si7201-B-11-IB Temperature range to -40C to 125C
-Corrected Si7202-B-01-IV(R) Bop min from 0.6mT to 0.5mT
-Corrected Si7202-B-01-IV(R) hysteresis from 2.0mT to 1.9mT
-Corrected Si7202-B-02-IV(R) sleep time from 1ms to 200ms (5Hz)
-Corrected Si7202-B-02-IV(R) Bop max from 5.9mT to 6.1mT
-Corrected Si7202-B-02-IV(R) Brp max from -5.9mT to -6.1mT

-Corrected Si7202-B-02-IV(R) Brp min from -4.6mT to -4.3mT
-Corrected Si7202-B-04-IB(R) Bop max from 1.4mT to 1.5mT
-Corrected Si7202-B-04-IB(R) Bop min from 0.6mT to 0.5mT
-Corrected Si7202-B-04-IB(R) Brp max from -0.6mT to -0.5mT
-Corrected Si7202-B-04-IB(R) Brp min from -1.4mT to -1.5mT
-Corrected Si7202-B-04-IB(R) hysteresis from 2.0mT to 1.9mT
-Corrected Si7206-B-00-IV(R) Bop max from 1.4mT to 1.5mT
-Corrected Si7206-B-00-IV(R) Bop min from 0.6mT to 0.5mT
-Corrected Si7206-B-00-IV(R) Brp max from -0.6mT to -0.5mT
-Corrected Si7206-B-00-IV(R) Brp min from -1.4mT to -1.5mT
-Corrected Si7206-B-00-IV(R) hysteresis from 2.0mT to 1.9mT
-Corrected Si7204-B-00-FV(R) Bop max from 1.1mT to 1.2mT
-Corrected Si7204-B-00-FV(R) Brp min from -1.1mT to -1.2mT
-Corrected Si7204-B-00-FV(R) hysteresis from 2.0mT to 1.8mT

Reason for Change

Release of new OPNs and correction to datasheet listing incorrect specifications

Impact on Form, Fit, Function, Quality, Reliability

The following OPNs have had key specification changes which impacts function, Si7201-B-03-IV(R), Si7201-B-08-IV(R), Si7201-B-09-IB(R), Si7201-B-09-IV(R), Si7201-B-11-IB(R), Si7202-B-01-IV(R), Si7202-B-02-IV(R), Si7202-B-04-IB(R), Si7206-B-00-IV(R), Si7204-B-00-FV(R). All other OPNs have no impact to form, fit, function, quality, or reliability.

Product Identification

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Si7201-B-00-FV
Si7201-B-01-FV
Si7201-B-02-FV
Si7201-B-03-IV
Si7201-B-04-IV
Si7201-B-05-IV
Si7201-B-06-IV
Si7201-B-07-IV
Si7201-B-08-IV
Si7201-B-09-IB
SI7201-B-10-IV
Si7201-B-11-IB
SI7201-B-12-IV
SI7201-B-20-IV
SI7201-B-21-IV
SI7201-B-22-IV
SI7201-B-30-IV
SI7201-B-31-IV
SI7201-B-32-IV
SI7201-B-40-IV
SI7201-B-41-IV
Si7201-B-80-FV
Si7201-B-81-FV
Si7201-B-82-FV
Si7201-B-83-IV
Si7201-B-84-IV
Si7201-B-85-IV
Si7201-B-86-IV
Si7201-B-87-IV
Si7203-B-00-FV
Si7205-B-00-IV
Si7202-B-00-FV
Si7202-B-01-IB
Si7202-B-01-IV
Si7202-B-02-IV
Si7202-B-04-IB
Si7206-B-00-IV
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Si7204-B-00-FV

Last Date of Unchanged Product: 11/5/2019

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

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Qualification Data

Attached

Si7200 SOT23 Qualification Report

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Part Rev A, TSMC Fabrication							
Test Group A – Accelerated Environment Stress Tests (JCET Assembly)							
HAST	JA110		Q041382	0/80			
	130°C, 85%RH	3 lots, N=>25	Q042212	0/80	1	3 lots	Pass
	Vcc=5.5V, 96 hours		Q042216	0/80		0/240	
UHAST	JA118		Q040903	0/82			
	130°C, 85%RH	3 lots, N=>25	Q042213	0/82	1	3 lots	Pass
	96 Hours		Q042217	0/80		0/246	
Temp Cycle	JA104		Q040902	0/80			
	Cond C: -65°C to 150°C	3 lots, N=>25	Q042214	0/80	1	3 lots	Pass
	500 cycles		Q042218	0/80		0/240	
HTSL	JA103		Q040901	0/50			
	150°C, 1000hr	3 lots, N=>25	Q042215	0/50	1	3 lots	Pass
			Q042219	0/50		0/150	
Test Group A – Accelerated Environment Stress Tests (AMKOR Assembly)							
HAST	JA110		Q040625	0/80			
	130°C, 85%RH	3 lots, N=>25	Q040601	0/80	1	3 lots	Pass
	Vcc=5.5V, 96 hours		Q040813	0/80		0/240	
UHAST	JA110		Q040628	0/80			
	130°C, 85%RH	3 lots, N=>25	Q040604	0/80	1	3 lots	Pass
	96 hours		Q040816	0/82		0/242	
Temp Cycle	JA104		Q040627	0/80			
	Cond C: -65°C to 150°C	3 lots, N=>25	Q040603	0/80	1	3 lots	Pass
	500 cycles		Q040815	0/82		0/242	
HTSL	JA103		Q040626	0/50			
	150°C, 1000hr	3 lots, N=>25	Q040602	0/50	1	3 lots	Pass
			Q040814	0/50		0/150	
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108		Q041163	0/98			
	T_J ≥ 125°C, Dynamic	3 lots, N=>77	Q040022	0/102		3 lots	Pass
	Vcc=5.5V, 1000 hours		Q040618	0/79		0/279	
ELFR	AEC-Q100-008		Q040713	0/808			
	T_J ≥ 125°C, Dynamic	3 lots, N=>800	Q039895	0/815		4 lots	Pass
	Vcc=5.5V, 48 hours		Q040714	0/804		0/3236	
			Q041373	0/809			
Test Group E – Electrical Verification							
ESD-HBM	AEC-Q100-002		Q040356	0/48		8000 V	
		1 lot, N=>3	Q040357	0/18	Class H2	2500 V	Pass

Prepared on: 4-June-2019 by Wilson Choy

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Si7200 SOT23 Qualification Report

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q040358 Q040359	0/15 0/15	Class C6	1000 V 1000 V	Pass
Latch Up	AEC-Q100-004 ±100mA	1 lot, N=>6	Q040362 Q040360	0/7 0/7	Class 1	25 °C	Pass
Latch Up	AEC-Q100-004 ±200mA	1 lot, N=>6	Q040363 Q040361	0/7 0/7	Class 2	125 °C	Pass

Notes:

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

This report applies to the following part numbers:			
Si7201-B-xx-FV/R	Si7203-B-xx-FV/R	Si7210-B-xx-IV/R	Si7214-B-xx-IV/R
Si7201-B-xx-IV/R	Si7204-B-xx-FV/R	Si7211-B-xx-IV/R	Si7215-B-xx-IV/R
Si7202-B-xx-FV/R	Si7205-B-xx-IV/R	Si7212-B-xx-IV/R	Si7216-B-xx-IV/R
Si7202-B-xx-IV/R	Si7206-B-xx-IV/R	Si7213-B-xx-IV/R	Si7217-B-xx-IV/R

Prepared on: 4-June-2019 by Wilson Choy

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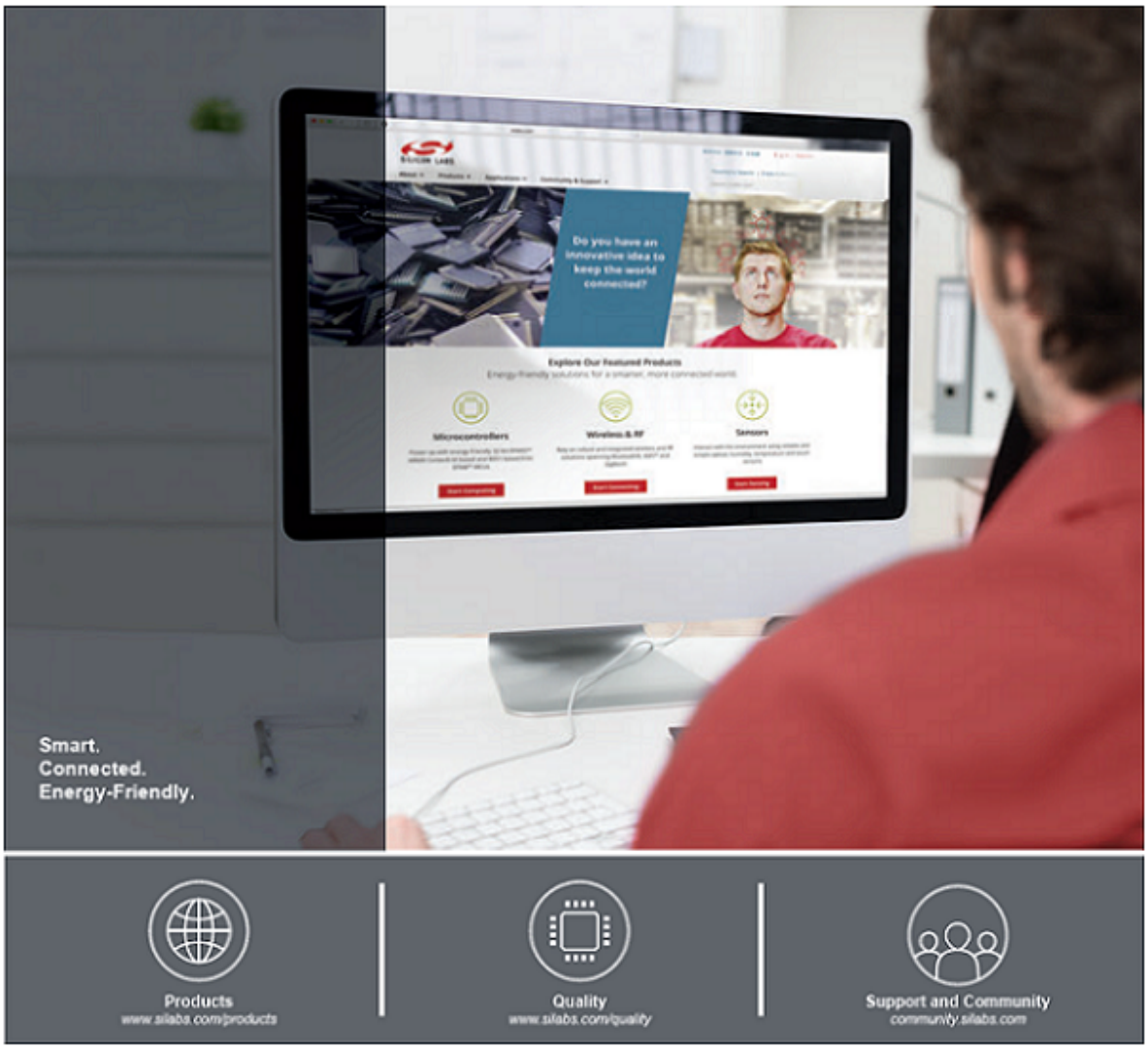

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