



# 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

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

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](mailto:PCNEarlyAcceptance@silabs.com)

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### Qualification Data

Attached



### Si7200 SOT23 Qualification Report

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



### Si7200 SOT23 Qualification Report

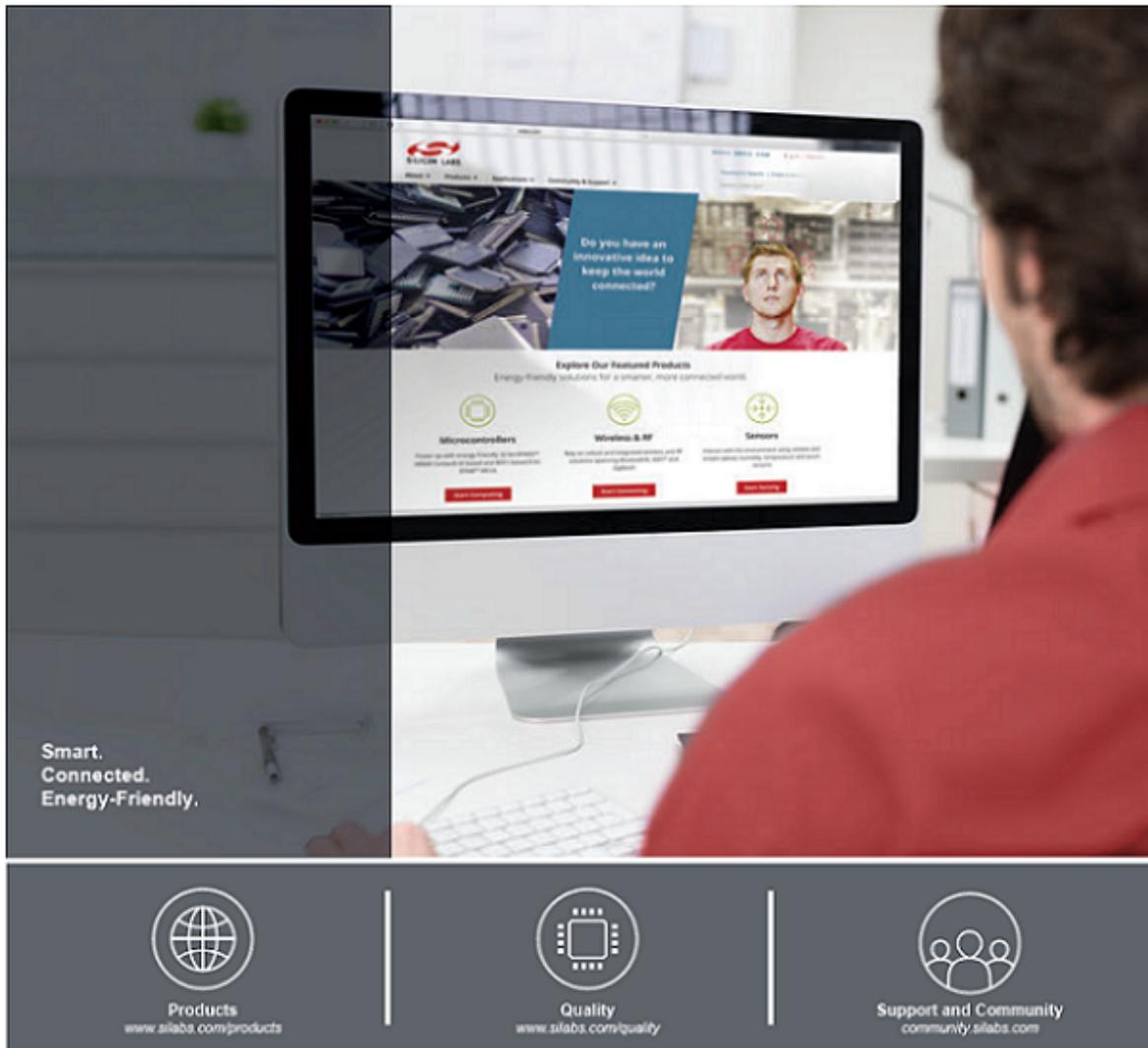
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Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q040358	0/15	Class C6	1000 V	Pass
			Q040359	0/15		1000 V	
Latch Up	AEC-Q100-004 ±100mA	1 lot, N=>6	Q040362	0/7	Class 1	25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

Notes:

- 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



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