Product Change Notification - BCD0500017 - JAON-20BQVK768

Date:

23 Dec 2019

Product Category:

Power Management - Power Switches

Affected CPNs:

Notification subject:

CCB 2837 Final Notice: Release to production of listed Micrel Power Switches product type manufactured with the BCD05 process technology to Fabrication site (FAB 5).

Notification text:

PCN Status:

Final notification

Note: This final PCN only pertains to the products listed in this PCN. Additional final PCNs may be issued for this combination of product type and process technology.

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Release to production of listed Micrel Power Switches product type manufactured with the BCD05 process technology to Fabrication site (FAB 5).

Pre Change:

Fabricated at Micrel fabrication site (San Jose, CA, USA) (SJ) using 6 inch wafers.

Post Change:

Fabricated at Atmel Fabrication site FAB 5 (Colorado Springs, CO, USA) (COS) using 6 inch wafers

Pre and Post Change Summary:

	Pre Change	**Post Change**	
Fabrication Location	Micrel Fabrication Site (San Jose, CA, USA)	Primary Fab Location: Atmel Fabrication site FAB 5 (Colorado Springs, CO USA)	Backup Fab Locations: Microchip Fabrication Sites (Tempe, AZ and Gresham, OR, USA)
Wafer Diameter	6 inches (150 mm)	6 inches (150 mm)	8 inches (200 mm)
Quality certification	ISO9001	ISO9001/TS16949	ISO/TS16949
Data sheet / specifications	No Change	No Change	No Change
Design/layout	No Change	No Change	No Change
Die Size	No change	No change	No change
Final test program	No change	No change	No change
Package Type/MSL	No Change	No Change	No Change

Impacts to Data Sheet:

No impact anticipated.

Change Impact:

None

Reason for Change:

To improve productivity with the closure of the Micrel fab (SJ) as part of the integration of Micrel and Microchip.

Change Implementation Status:

In Progress

Estimated First Ship Date:

As identified for each CPN listed in the attached parts list.

Estimated First Ship Date (EFSD) are identified for each catalog part numbers (CPN) listed in the attached parts list. This can be found in the attachments field below labeled as PCN_#_Affected_CPN.

Summary Time Table of notable events to date:

	December 2016					->	May 2017				->	December 2019				January 2020				
Workweek	48	49	50	51	52		18	19	20	21		49	50	51	52	01	02	03	04	05
Initial PCN Issue Date				X																
Qualification Report Availability and Intermediate PCN issue date JAON-20BQVK768							X													
Final PCN Issue Date JAON-20BQVK768 - BCD0500017															X					
Estimated First Ship Date																	As listed in the attached parts list			

Method to Identify Change:

Traceability code.

Qualification Report:

Please open the attachments included with this PCN labeled as PCN_#_Qual Report.

Revision History:

December 23, 2016: Issued initial notification.

May 4, 2017: Issued intermediate notification. Attached the Qualification Report.

December 23, 2019: Issued final notification as PCN number JAON-20BQVK768 - BCD0500017 for listed Micrel's Power Switches products manufactured with the BCD05 process technology to Fabrication site (FAB 5). Provided estimated first ship date (EFSD) for each CPN listed in the attached parts list.

The change described in this PCN does not alter Micrel's or Atmel's or Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s):

PCN_JAON-20BQVK768-BCD0500017_Affected_CPN.pdf
PCN_JAON-20BQVK768-BCD0500017_Qual_Report.pdf
PCN_JAON-20BQVK768-BCD0500017_Affected_CPN.xls

Please contact your local Microchip sales office with questions or concerns regarding this notification.

Terms and Conditions:

If you wish to receive Microchip PCNs via email please register for our PCN email service at our PCN home page select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the PCN FAQ section.
If you wish to change your PCN profile, including opt out, please go to the PCN home page select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

MIC94161YCS-TR
MIC94164YCS-TR

JAON-20BQVK768-BCD0500017 – CCB 2837 Final Notice: Release to production of listed Micrel Power Switches product type manufactured with the BCD05 process technology to Fabrication site (FAB 5).

Affected Catalog Part Numbers (CPN)

PCN_JAON-20BQVK768-BCD0500017	
CATALOG_PART_NBR	**Estimated First Ship Date (EFSD)**
MIC94161YCS-TR	January 06, 2020
MIC94164YCS-TR	January 06, 2020

MICROCHIP

QUALIFICATION REPORT SUMMARY

PCN #: JAON-20BQVK768 - BCD0500017

Date
April 6, 2017

Qualification of Fabrication site (FAB 5) for Micrel products manufactured with the BCD05 process technology.

PART NUMBER	PACKAGE TYPE	ASSEMBLY LOCATION	FAB LOCATION	PROCESS NAME
MIC2104YML	QFN33-16L	UNISEM, MALAYSIA	MICROCHIP FAB-5 Colorado Springs	BCD05/CSI05

DIE QUALIFICATION RESULTS

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	168 HR Rej/ss	500 HR Rej/ss	1000 HR Rej/ss	COMMENTS
HTOL **High Temperature Operating Life Test**	JESD22, Method 108	1643	R6X0362 UNIS173100082.000	0/82	0/82	0/82	*Units went straight to 1000 hours. No read out at 500 hours.
	Ta = +125°C	1702	6Y2663 UNIS174200177.100B	0/80	-*	0/80	
	Vcc = +75V	1703	6Y0748 UNIS174300027.000	0/79	-*	0/78**	

*Lot 2 under 500HR went straight to1000 HR skipping the 500 HR read.

** Lot 3 started with 79 units, one device removed at 168 hours, 78 units went straight to straight to 1000 hours

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	168 HR Rej/ss	408 HR Rej/ss	COMMENTS
HTOL **High Temperature Operating Life Test**	JESD22, Method 108 Ta = +150°C Vcc = +75V	1702	R6X0362 UNIS173100082.000	0/77	0/77	*77 units went straight to 408 hours. No read out at 168 hours.
		1703	B6Y0748 UNIS174300027.000	-*	0/77	

ELECTROSTATIC DISCHARGE

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
ESD-HBM Human Body Model ATE Test @ Room +25C	R= 1500 Ohms C= 100 pF 1X +/- Voltage	1643	R6X0362 UNIS173100082.000	+/-1000V	0/3	Note: ESD ratings are, device specific. All products, qualified on the 6" Micrel, process technologies at, Microchip Fabs will have the, same or better ESD and, Latch-up performance as the 6" products fabricated at San Jose wafer fabrication site.
ESD-CDM Charged Device Model ATE Test @ Room +25C	JESD22-C101 1X +/- Voltage	1643	R6X0362 UNIS173100082.000	+/-1500V	0/3	

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
LATCH-UP	JESD-78 A = +25°C	1643	R6X0362 UNIS173100082.000	I/O LU O/V LU	0/6 0/6	Same as SJ 6 inch

PACKAGE QUALIFICATION RESULTS

TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**Rej/ss**	**COMMENTS**
Level 1 ***Pre-conditioning Flow*** Use samples to perform UHAST/BHAST/TCY	***JESD22-A113***	1643	R6X0362 UNIS173100082.000	0/375	
		1702	6Y2663 UNIS174200177.100	0/272	
		1703	B6Y0748 UNIS174300027.000	0/431	
TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**96 HR** Rej/ss	**COMMENTS**
UHAST ***With Level 1 Pre-conditioning*** Tpeak + 260°C 3X Reflow	Ta= +131°C/85%RH JESD22-A118 (UNBIASED)	1643	R6X0362 UNIS173100082.000	0/82	
		1702	6Y2663 UNIS174200177.100	0/82	
		1703	B6Y0748 UNIS174300027.000	0/82	
TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**96 HR** Rej/ss	**COMMENTS**
BHAST ***With Level 1 Pre-conditioning*** Tpeak + 260°C 3X Reflow	JESD22-A110 (BIASED) Ta= +130°C/85%RH Vcc = +75V	1643	R6X0362 UNIS173100082.000	0/82	
		1702	6Y2663 UNIS174200177.100	0/82	
		1703	B6Y0748 UNIS174300027.000	0/82	
TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**500 CY** Rej/ss	**COMMENTS**
TEMP CYCLE ***With Level 1 Pre-conditioning*** Tpeak + 260°C 3X Reflow	JESD22-A104 Ta = -65°C / +150°C	1643	R6X0362 UNIS173100082.000	0/82	
		1702	6Y2663 UNIS174200177.100	0/82	
		1703	B6Y0748 UNIS174300027.000	0/82	
TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**500 HR** Rej/ss	**COMMENTS**
HTSL ***High Temperature Storage Life***	JESD22-A103 Ta = +175°C	1643	R6X0362 UNIS173100082.000	0/50	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	1000 HR Rej/ss	**COMMENTS**
HTSL ***High Temperature Storage Life***	JESD22-A103 Ta = +150°C	1643	R6X0362 UNIS173100082.000	0/50	
FLAMMABILITY	UL-94V-0 Certified	All mold compounds used by Micrel meet this standard. See the UL website on-line list of material flammability certifications. Micrel requires a Certificate of Compliance from the assembly house and we verify the certifications on the web.			