

Product Change Notification - JAON-04VUHY153

Date: 08 Jun 2016
Product Category: SMSC
Notification subject: CCB 1735 Final Notice: Qualification of NSEB as an additional assembly site for selected products in 16L QFN (5x5x0.9mm) package.
Notification text: **PCN Status:**
Final notification

Microchip Parts Affected:

Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

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

Description of Change:

Qualification of NSEB as an additional assembly site for selected products in 16L QFN (5x5x0.9mm) package.

Pre Change:

Assembled at SCC assembly site using C194 lead-frame, 8290 die attach material, G770 molding compound and Palladium coated copper wire with gold flash (CuPdAu) bond wire.

Post Change:

Assembled at NSEB assembly site using EFTEC-64T lead-frame, 8600 die attach material, G700LTD molding compound and palladium coated copper wire with gold flash (CuPdAu) bond wire.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	SCC assembly site	NSEB assembly site
Wire material	CuPdAu wire	CuPdAu wire
Die attach material	8290	8600
Molding compound material	G770	G700
Lead frame material	C194	EFTEC-64T

Impacts to Data Sheet:

None

Reason for Change:

To improve on-time delivery performance by qualifying NSEB assembly site. SCC assembly site will no longer have manufacturing support to assemble selected products available in 16L QFN (5x5x0.9mm) package.

Change Implementation Status:

In Progress

Estimated First Ship Date:

July 10, 2016 (date code: 1627)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Summary Table:

	September 2015					---- >	June 2016					July 2016			
	36	37	38	39	40		22	23	24	25	26	27	28	29	30
WW															
Initial PCN Issue Date					X										
Qual Report Availability							X								
Final PCN Issue Date							X								
Estimated Implementation Date											X				

Markings to Distinguish Revised from Unrevised Devices:

Traceability code

Revision History:

September 29, 2015: Issued initial notification.

June 8, 2016. Issued final notification. Attached the qualification report. Revised the estimated first ship date from January 22, 2016 to July 10, 2016. Updated the post change to only reflect NSEB assembly site. Updated reason for change to emphasize that SCC will no longer have manufacturing support to assemble selected products available in 16L QFN (5x5x0.9mm) package.

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

Attachment(s):

[PCN_JAON-04VUHY153_Qual_Report.pdf](#)

[PCN_JAON-04VUHY153_Affected_CPN.pdf](#)

[PCN_JAON-04VUHY153_Affected_CPN.xls](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

PCN_JAON-04VUHY153
CATALOG_PART_NBR
SEC1100-A5-02
SEC1100-A5-02H1
SEC1100-A5-02NC-TR
SEC1100-A5-02S2
SEC1100-A5-02-TR
SEC1110-1100A5
SEC1110-A5-02
SEC1110-A5-02A1
SEC1110-A5-02A1-TR
SEC1110-A5-02G1
SEC1110-A5-02G1-TR
SEC1110-A5-02NC
SEC1110-A5-02NC-TR
SEC1110-A5-02-TR
SEC1110-A5-03G1
SEC1110-A5-03G1-TR
SEC1110I-A5-02
SEC1110I-A5-02G1
SEC1110I-A5-02G1-TR
SEC1110I-A5-02-TR
USX1011-A5-02



MICROCHIP

**QUALIFICATION REPORT
RELIABILITY LABORATORY**

PCN #: JAON-04VUHY153

**Date:
May 31, 2016**

**Qualification of NSEB as an additional assembly site
for selected products in 16L QFN (5x5x0.9mm)
package.**

**Distribution: CORPORATE QA/RE
CORPORATE PACKAGING
SUPPLIER ENGINEERING**



OBJECTIVE

Qualification of NSEB as an additional assembly site for selected products in 16L QFN (5x5x0.9mm) package.

QUAL ID	QAR2015-025
BD #	BDM-000885C
PART #	XA6011UKXA0C (USX1011-A5-02)
CCB #	1735

PRODUCT INFORMATION

PACKAGE TYPE	QFN (SAWN)
PACKAGE LEAD COUNT	16 (5x5X0.9mm)
PACKAGE CODE	UKX
MANUFACTUR PART #	XA6011UKXA0C (USX1011-A5-02)
WAFER LOT	TC14915100248.120
WAFER MASK	136021A1 (XA601)
WAFER PROCESS	0.13um
FAB	TSD - Fab 14 (TSMC)
CIRCUIT UNDER PAD	YES

Material used in the Assembly:

LEADFRAME MATERIAL	EFTEC-64T (Double Ring / Etched)
LEADFRAME SURFACE	ROUGHENED
LEADLOCK	YES
DIE ATTACH EPOXY TYPE	8600
EPOXY – CONDUCTIVE	YES
WIRE TYPE	CuPdAu
MOLDING COMPOUND TYPE	G700LTD
LEAD FINISH PROCESS	ELECTROPLATING
LEAD FINISH COMPOSITION	Matte-Sn
MARKING	LASER



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	MARKING /Date Code
NSEB162300453.000	POUK48.00 / TC14915100248.120	USX1011-2 B1536-121 536J4VA AULTH (e3)
NSEB162400003.000	POUK48.00 / TC14915100248.120	USX1011-2 B1537-121 537J61A AULTH (e3)
NSEB162300464.000	POUK48.00 / TC14915100248.120	USX1011-2 B1536-121 536J5QA AULTH (e3)

Result

Pass Fail _____

The 16L Sawn QFN (5x5x0.9mm) package using CuPdAu 0.7 mil wire, assembled by NSEB Pass Reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 3 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Prepared By: Peter Boudouris Date: May 31, 2016 (Corporate Reliability & FA)

Approved By: Vassilios Danginis Date: May 31, 2016 (Corporate Reliability & FA)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 3)	30 °C/ 60%RH	IPC/	320	0/320	Pass	LOT 1
	Moisture Soak 192 hrs.	JEDEC	320	0/320	Pass	LOT 2
	(IPC/JEDEC J-STD-020D)	J-STD-020D	320	0/320	Pass	LOT 3

<u>Precondition Prior Perform Reliability Tests (At MSL Level 3)</u>	Electrical Test :+25°C and +85°C	JESD22-A113	320 (0)	320	PASS	Good Devices
	SAT		Lot 1	320		
	Bake 125°C, 24 hrs		320			
	30°C/60%RH Moisture Soak 192hrs		320			
	3x Convection-Reflow 265°C max		320			
	SAT		320			
	Electrical Test :+25°C and +85°C		320	PASS		

<u>Precondition Prior Perform Reliability Tests (At MSL Level 3)</u>	Electrical Test :+25°C and +85°C	JESD22-A113	320 (0)	320	PASS	Good Devices
	SAT		Lot 2	320		
	Bake 125°C, 24 hrs		320			
	30°C/60%RH Moisture Soak 192hrs		320			
	3x Convection-Reflow 265°C max		320			
	SAT		320			
	Electrical Test :+25°C and +85°C		320	PASS		

<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 3)	Electrical Test :+25°C and +85°C SAT Bake 125°C, 24hrs 30°C/60%RH Moisture Soak 192hrs 3x Convection-Reflow 265°C max SAT Electrical Test :+25°C and +85°C	JESD22- A113	320 (0) Lot 2	320 320 320 320 320 320	PASS PASS	Good Devices
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PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	Stress Condition: -65°C to +150°C, 1000 Cycles Electrical Test: + 25°C, + 85°C	JESD22-A104	231 (0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
BIAS HAST	Stress Condition: +130°C/85%RH, 96hrs, 192hrs. Electrical Test: + 25°C, + 85°C	JESD22-A110	231 (0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
uHAST	Stress Condition: +130°C/85%RH, 96hrs, 192hrs. Electrical Test: + 25°C, + 85°C	JESD22-A110	231 (0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
High Temperature Storage Life	Stress Condition: Bake +150°C, 1008hrs Electrical Test : + 25°C, + 85°C	JESD22-A103	231 (0)	231 0/231	Pass	Parts had no Pre-Condition 77 units / lot