



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 AUTLTH (e3)
NSEB162300464.000	POUK48.00 / TC14915100248.120	USX1011-2 B1536-121 536J5QA AUTLTH (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	JESD22-A113	320 (0)	320	PASS	Good Devices
	SAT		Lot 2	320		
	Bake 125°C, 24hrs			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	

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

JAON-04VUHY153 - CCB 1735 Final Notice: Qualification of NSEB as an additional assembly site for selected products in 16L QFN (5x5x0.9mm) package.

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