ON Semiconductor

INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #16873

Generic Copy

Issue Date: 11-Jul-2012

TITLE: Product transfer from Unisem to Atp1 PLCC 68L

PROPOSED FIRST SHIP DATE: 01-Nov-2012

AFFECTED CHANGE CATEGORY(S): Assembly location

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or <Joh.Villanueva@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

ON Semiconductor wish to inform its customers of the product transfer of PLCC 68L from Unisem to Atp1 due to package discontinuance in Unisem. Unisem will be able to support until March 2013 only.

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QUALIFICATION PLAN:

Estimated Date for Qualification Completion: 10/30/2012
Samples should be available after completion of Qualification.

Seal code G:

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Package Reliability Qualification Plan

ON Product Name :		Qual Plan Revision :	A (QP120901)
Customer Product Name :	**SECURITY DOME CAMERA**	Date :	2/29/2012
Maskset :	**15004-529**	Prepared by :	Gelo Ramos
Package code & Type	**AKGG/68 PLCC**	Approved by :	
Package & Assembly House :	**Amkot Technology Philippines**	Total parts required :	1088

ACCELERATED ENVIRONMENT STRESS TESTS

Test #	Test	Reference	Test Conditions	Electrical Test Requirements	Sample Size per lot	Accept Criteria	# of Qual Lots	Total Parts Required for Qual Lots	# of Cntrl Lots	Total Parts Required for Control Lot	Comments
A1	**Moisture Preconditioning (PC)**	J-STD-020 & JESD22-A113	Moisture Soak (MSL = 3) Solder Reflow (3x @ 260°C)	Test @ room	154	0	3	462	1	154	Surface Mount Dervices only. Preconditioning before tests A0 (SAT), A2 (HAST/THB), A3 (AC/UHST), A4 (TC), A5 (PTC). Test conditions are package dependent.
A0	**Delamination check (SAT)**	J-STD-020	Acoustic Microscopy	N.A.	ALL	0	3	ALL	1	ALL	Samples preconditioned per test A1 (PC)
A3 (alt)	**HAST Unbiased (UHST)**	JESD22-A110	130°C/ 85%RH for 96 hrs	Test @ room	77	0	3	231	1	77	Samples preconditioned per test A1 (PC) and Preconditioning TC
A4	**Preconditioning Temperature Cycling (TC)**	JESD22-A104	-55°C to 125°C for 100 cycles	Test @ hot	77	0	3	231	1	77	Samples preconditioned per test A1 (PC). Test conditions are dependent on environment. Samples will continue UHAST & HAST.
A4	**Temperature Cycling (TC)**	JESD22-A104	-65°C to 150°C for 500 cycles	Test @ hot	77	0	3	231	1	77	Samples preconditioned per test A1 (PC). Test conditions are dependent on environment.
A6	**High Temperature Storage (HTS)**	JESD22-A103	150°C for 1000 hrs	Test @ room Test @ hot	77	0	3	231	1	77	Samples preconditioned per test B3 (EDR) (if applicable). Test conditions are dependent on environment.

PACKAGE ASSEMBLY INTEGRITY TESTS

Test #	Test	Reference	Test Conditions	Electrical Test Requirements	Sample Size per lot	Accept Criteria	# of Qual Lots	Total Parts Required for Qual Lots	# of Cntrl Lots	Total Parts Required for Control Lot	Comments
	X-ray	Mil STD 883 D meth 2012 & Mil STD 883 D meth 2030.		N.A.	15		3	45	1	15	
	Internal Visual	Mil-Std-883D method 2010.		N.A.	10		3	30	1	10	
	External Visual	Mil-Std-883D method 2009.		N.A.	ALL		ALL	ALL	ALL	ALL	**Performed on all Parts**
	Mark Permanency	JEDEC method B107		N.A.	12		1	12	1	12	
C1	**Wire Bond Shear (WBS)**	AEC-Q100-001		N.A.	30 bonds from 5 parts	Cpk > 1.33 Ppk > 1.66	3	15	1	5	
C2	**Wire Bond Pull Strength (WBP)**	MIL- STD883 Method 2011	Cond. C or D. Minimum pull strength after temperature cycle = 3 grams	N.A.	30 bonds from 5 parts	Cpk > 1.33 Ppk > 1.66 or 0 Fails after test A4 (TC)	3	15	1	5	
C3	**Solderability (SD)**	JESD22-B102		N.A.	15	> 95% lead coverage	3	45	1	15	If burn-in screening is normally performed on the device before shipment, samples for SD must first undergo burn-in. Perform 8 hour steam aging prior to testing. (1 hou
C4	**Physical Dimensions (PD)**	JESD22-B102 JESD22-B108		N.A.	10	Cpk > 1.33 Ppk > 1.66	3	30	1	10	See applicable JEDEC standard outline and individual device spec for significant dimensions and tolerances.

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INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #16873

Seal code: Y

Package Reliability Qualification Plan

ON Product Name :		Qual Plan Revision :	A (QP120901)
Customer Product Name :	**QUATAR2**	Date :	2/29/2012
Maskset :	**15004-009**	Prepared by :	Gelo Ramos
Package code & Type	**AKGY/68 PLCC**	Approved by :	
Package & Assembly House :	**Amkot Technology Philippines**	Total parts required :	1088

ACCELERATED ENVIRONMENT STRESS TESTS

Test #	Test	Reference	Test Conditions	Electrical Test Requirements	Sample Size per lot	Accept Criteria	# of Qual Lots	Total Parts Required for Qual Lots	# of Cntrl Lots	Total Parts Required for Control Lot	Comments
A1	**Moisture Preconditioning (PC)**	J-STD-020 & JESD22-A113	Moisture Soak (MSL = 3) Solder Reflow (3x @ 225°C)	Test @ room	154	0	3	462	1	154	Surface Mount Devices only. Preconditioning before tests A0 (SAT), A2 (HAST/THB), A3 (AC/UHST), A4 (TC), A5 (PTC). Test
A0	**Delamination check (SAT)**	J-STD-020	Acoustic Microscopy	N.A.	ALL	0	3	ALL	1	ALL	Samples preconditioned per test A1 (PC)
A3 (alt)	**HAST Unbiased (UHST)**	JESD22-A110	130°C/ 85%RH for 96 hrs	Test @ room	77	0	3	231	1	77	Samples preconditioned per test A1 (PC) and Preconditioning TC
A4	**Preconditioning Temperature Cycling (TC)**	JESD22-A104	-55°C to 125°C for 100 cycles	Test @ hot	77	0	3	231	1	77	Samples preconditioned per test A1 (PC). Test conditions are dependent on environment. Samples will continue
A4	**Temperature Cycling (TC)**	JESD22-A104	-65°C to 150°C for 500 cycles	Test @ hot	77	0	3	231	1	77	Samples preconditioned per test A1 (PC). Test conditions are dependent on environment.
A6	**High Temperature Storage (HTS)**	JESD22-A103	150°C for 1000 hrs	Test @ room Test @ hot	77	0	3	231	1	77	Samples preconditioned per test B3 (EDR) (if applicable). Test conditions are dependent on environment.

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	Internal Visual	Mil-Std-883D method 2010.		N.A.	10		3	30	1	10	
	External Visual	Mil-Std-883D method 2009.		N.A.	ALL		ALL	ALL	ALL	ALL	**Performed on all Parts**
	Mark Permanency	JEDEC method B107		N.A.	12		1	12	1	12	
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C4	**Physical Dimensions (PD)**	JESD22-B102 JESD22-B108		N.A.	10	Cpk > 1.33 Ppk > 1.66	3	30	1	10	See applicable JEDEC standard outline and individual device spec for significant dimensions and tolerances.

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List of affected Customer Specific Parts:

15004-009-XTD
15004-529-XTP
15004-530-XTP
15007-510-XTD
20515-001-XTD
20515-001-XTP
20668-001-XTD
20668-001-XTP
20715-002-XTD
20715-002-XTP