ON Semiconductor

UPDATE CHANGE NOTIFICATION # 16277B

Generic Copy

Issue Date: 12-Jan-2011

TITLE: Dual Source Fab10 Products with Gresham Fab

PROPOSED FIRST SHIP DATE: 25-Oct-2011

AFFECTED CHANGE CATEGORY(S): Wafer Fabrication

ADDITIONAL RELIABILITY DATA: Available

SAMPLES: Contact your local ON Semiconductor Sales Office

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

NOTIFICATION TYPE:

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

1. Update to UN16277A dated 29-Apr-2010.
    a. UN16277A is update to UN16277 (SCR#DOC0632003) dated Jun 18, 2009.
    b. UN16277 is update to PCN030i (SCR # DOC0526107) dated Nov 12, 2008.
2. Changed proposed first ship date from 03-Mar-2011 to 25-Oct-2011
3. Updated affected devices list (last page).
4. Deleted qualification plan for 19063. Updated qualification plan for 19117.

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Product Reliability Qualification Plan

AMIS Product Name :	**HALO**	Qual Plan Revision :	**B**
Customer Product Name :	**GE Medical Systems**	Date :	**12/1/10**
Maskset :	**19117-004**	Prepared by :	**Richard Tan**
Die Size :	**8.51x10.62mm^2**	Approved by :	**Eddie Glines**
Process & Waferfab :	**C5, USGR1**	Qual Start Date Forecast :	**3/7/2011**
Package & Assembly House :	**LFBGA 143 pin, Amkor**	Total parts required :	**670**

ACCELERATED ENVIRONMENT STRESS TESTS

Test #	Test	Reference	Test Conditions	Electrical Test Requirements	Sample Size per lot	Accept Criteria	# of Lots	Total Parts Required	Comments
A1	**Moisture Preconditioning (PC)**	J-STD-020 & JESD22-A113	Moisture Soak (MSL = x) Solder Reflow (3x @ xxx°C) (conditions are package dependent)	Test @ room	140	0	3	420	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.	5	0	3	15	Samples preconditioned per test A1 (PC)
A2	**HAST Biased (HAST)**	JESD22-A110	110°C/ 85%RH @ 264hrs	Test @ room Test @ hot	45	0	3	135	Samples preconditioned per test A1 (PC)
A3	**Autoclave (AC)**	JESD22-A102	121°C / 100% RH for 96 hrs	Test @ room	45	0	3	135	Samples preconditioned per test A1 (PC)
A4	**Temperature Cycling (TC)**	JESD22-A104	-55°C to 125°C for 1000 cycles	Test @ hot	45	0	3	135	Samples preconditioned per test A1 (PC) 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 Lots	Total Parts Required	Comments
C1	**Wire Bond Shear (WBS)**	AEC-Q100-001		N.A.	30 bonds from 5 parts	Cpk > 1.33 Ppk > 1.66	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	1	5	

ELECTRICAL VERIFICATION TESTS

Test #	Test	Reference	Test Conditions	Electrical Test Requirements	Sample Size per lot	Accept Criteria	# of Lots	Total Parts Required	Comments
E2a	**ESD - Human Body Model (HBM)**	JESD22-A114	500V, 1KV, 1K5V, 2KV, 4KV -or- 500V, 1KV, 2KV, 4KV	Test @ room	3 per voltage	0 @ ≤ 2KV	1	15	
E2b	**ESD - Machine Model (MM)**	JESD22-A115	100V, 150V, 200V, 250V, 300V - or - 50V, 100V, 200V, 400V	Test @ room	3 per voltage	0 @ ≤ 200V	1	15	
E3	**ESD - Charged Device Model**	ESD-STM 5-3-1-1999	250V, 500V, 750V, 1000V	Test @ room	3 per voltage	0 @ ≤ 500V - or -	1	15	750V applies to corner pins only. All others, 500V
E4	**Latch-up (LU)**	JESD78	100 mA @ 25°C	Test @ room	6	0	1	6	
E5	**Electrical Distribution (ED)**	AEC-Q100-009		Test @ room Test @ hot Test @ cold	30	Cpk >1.33 Ppk>1.66	3	90	

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List of affected Customer Specific Parts:

MPN impact list (ASICS)
19117-002-XTD
19117-003-XTD
19117-004-XTD