



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #16831Generic Copy

Issue Date: 25-Apr-2012**TITLE:** PCWB/PCWC/PCWD: New Bill Of Material at assembly.**PROPOSED FIRST SHIP DATE:** 25-Aug-2012**AFFECTED CHANGE CATEGORY(S):** Assembly process**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or <filip.thierens@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:**Description of Process Change:**

Change items	Current	New
Frame type	Half etch	Full lead
Epoxy	Ablestik 2025M	CRM 1150B
Tape	Nitto TRM 6250L	AT-5
Pre-mold plasma	No	Yes
Laser Deflash	Yes	No
Chemical Deflash	No	Yes

The purpose is to improve quality of the packaging with respect to potential non-wetting and potential delamination.



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QUALIFICATION PLAN:

Estimated date for qualification Completion: Jun/18/2012

Package Reliability Qualification Plan									
ON Semi Product Name :		0PCWx BOM change (die attach, plasma clean & lead ter			Qual Plan Revision :		1.0		
Customer Product Name :					Date :		24-Jan-2012		
Maskset :		not applicable			Prepared by :		Daniel Vanderstraeten		
Die Size :					Approved by :				
Process & Waferfab :		not applicable			Qual Start Date Forecast :		Q2/2012		
Package & Assembly House :		NQFP, UNISEM Batam			Total parts required :		657		
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 = 3) Solder Reflow (3x @ 260°C) Acoustic Microscopy (SAT)	Test @ room	154	0	3	462	Preconditioning before tests A2, A3 & A4.
A3	HAST Unbiased (UHST)	JESD22-A118	130°C/ 85%RH for 96 hrs or 110°C/ 85%RH for 264 hrs	Test @ room	77	0	3	231	Samples preconditioned per test A1.
A4	Temperature Cycling (TC)	JESD22-A104	-65°C to 175°C for 500 cycles	Test @ hot	77	0	3	231	Samples preconditioned per test A1. Wire Bond Pull (test C2) planned after TC.
A6	High Temperature Storage (HTS)	JESD22-A103	175°C for 1000 hrs	Test @ room Test @ hot	45	0	3	135	/
ACCELERATED LIFETIME SIMULATION TESTS									
Test #	Test	Reference	Test Conditions	Electrical Test Requirements	Sample Size per lot	Accept Criteria	# of Lots	Total Parts Required	Comments
B1	High Temperature Operating Lifetest (HTOL)	JESD22-A108	Ta = 150°C (Tj ~ 175°C) for 2000 hrs	Test @ room Test @ hot Test @ cold	45	0	1	45	
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	Samples preconditioned per test A4.
C2	Wire Bond Pull Strength (WBP)	MIL- STD883 Method 2011		N.A.	30 bonds from 5 parts	0 Fails	1	5	Samples preconditioned per test A4.
C3	Solderability (SD)	JESD22-B102		N.A.	15 parts	> 95% lead coverage	1	15	Generic qualification of package assembly line.



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List of affected Customer Specific Parts:

0PCWB-002-XTP
0PCWC-002-XTP
0PCWC-003-XTP
0PCWC-004-XTP
0PCWC-006-XTP
0PCWC-007-XTP
0PCWC-008-XTP
0PCWD-001-XTP (in development)