



Process Change Notification

PCN Number: PCN-2016-36

PCN Notification Date: 04/07/2016

Amended: Informational (ver. 2.0 05-10-2016)

WM8983 Assembly and Test Transfer to ASE ChungLi

Dear Customer,

This notification is to advise you of the following amended change(s) from the original notification listed in bullets.

This notification is to advise you of the following change(s).

WM8983 assembly and test is being transferred from Unisem to ASE ChungLi

- Cover page title – changed amended version/date
- Changes To Product Identification Resulting From This PCN section on pg. 5 –
 - CURRENT MARKING – mark code image changed to YMTTRFD

If you have any questions, please contact your Sales Representative.

Sincerely,

Quality Systems Administrator
Cirrus Logic Corporate Quality
Phone: +1(512) 851-4000



Process Change Notification

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Products Affected:

The devices listed on this page are the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

Technical details of this Process / Product Change follow on the next page(s).

Title:	WM8983 Assembly and Test Transfer to ASE ChungLi				
Customer Contact:	Local Field Sales Representative	Phone:	(512) 851-4000	Dept:	Corporate Quality
Proposed 1st Ship Date:	Estimated Q3 2016	Sample Availability Date:	March 2016		
Change Type:					
x	Assembly Site	x	Assembly Process	x	Assembly Materials
	Wafer Fab Site		Wafer Fab Process		Wafer Fab Materials
	Wafer Bump Site		Wafer Bump Process		Wafer Bump Material
x	Test Site		Test Process		Design
	Electrical Specification		Mechanical Specification		Part Number
x	Packing/Shipping/Labeling		Other		
Comments:					

PCN Details

Description of Change:

- Assembly and test will move from Unisem Malaysia to ASE ChungLi
- Assembly materials will change, details in below table
- Package quantity in Reel will remain the same : 3.5k, and in Tube will reduce from 95 to 60
- Marking will change, and logo will be removed, details below
- Minor changes in Package Outline Diagram (POD) – details below
- Key Changes for new Site:

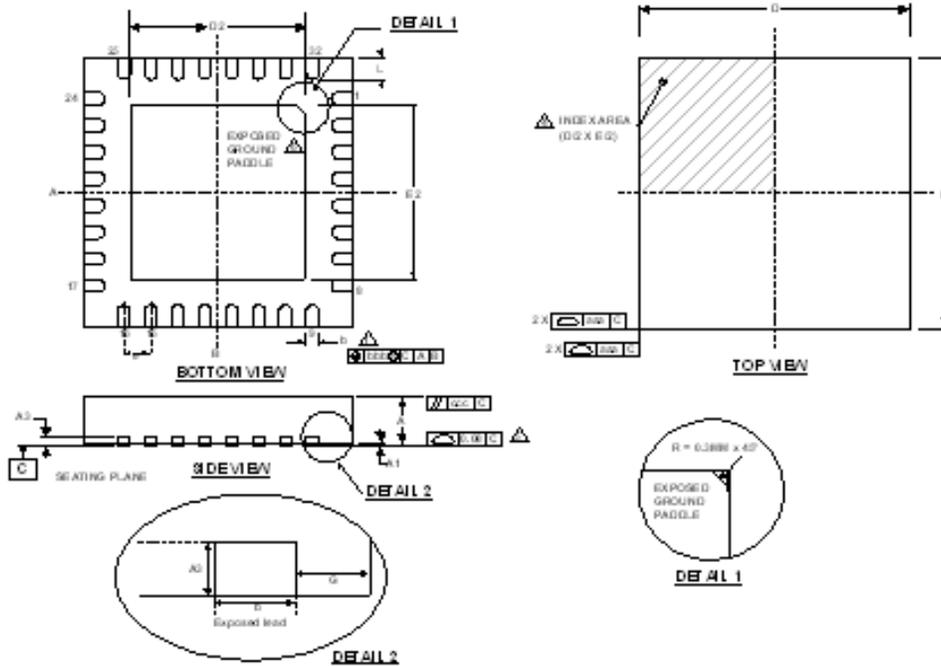
	CURRENT	NEW
Assembly & Test Location	Unisem Malaysia	ASE ChungLi
Bond wire	1 mil Au	1 mil Cu
Leadframe	440467 (HD)	Samsung / CDA 194
Die attach	Sumitomo / CRM1076NS	Hitachi / 4900G
Mold compound	Sumitomo / EMEG770HCD	Sumitomo / EME-G631
Tube Package Quantity	95	60
Marking	See Below	
Package Outline Diagram	See Below	

Package Outline Diagram

Unisem POD

FL: 32 PIN QFN PLASTIC PACKAGE 5 x 5 x 0.9 mm BODY, 0.50 mm LEAD PITCH

DM044.B

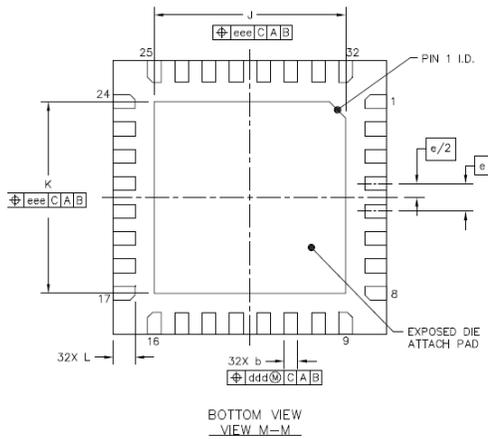
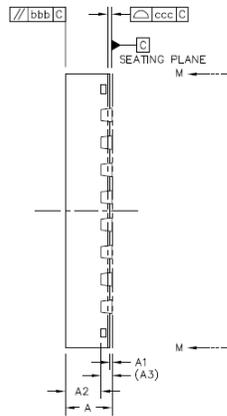
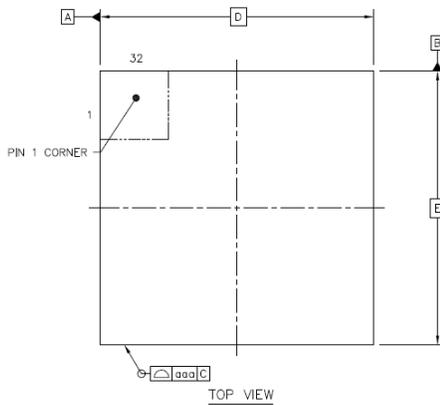


Sym bols	Dimensions (mm)			
	MIN	NOM	MAX	NOTE
A	0.80	0.85	0.90	
A.1	0	0.02	0.05	
A.3		0.203 REF		
b	0.20	0.25	0.30	1
D		5.00 B SC		
D2	3.05	3.10	3.15	2
E		5.00 B SC		
E2	3.05	3.10	3.15	2
e		0.50 B SC		
G		0.625		
L	0.35	0.40	0.45	
Tolerances of Form and Position				
aaa		0.15		
bbb		0.10		
ccc		0.10		
REF:	JEDEC, MO-220, VARIATION VHHD-5.			

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ASE Chungli POD



	SYMBOL	MIN	NOM	MAX
TOTAL THICKNESS	A	0.8	0.85	0.9
STAND OFF	A1	0	0.035	0.05
MOLD THICKNESS	A2	---	0.65	0.67
L/F THICKNESS	A3		0.203 REF	
LEAD WIDTH	b	0.2	0.25	0.3
BODY SIZE	X	D		5 BSC
	Y	E		5 BSC
LEAD PITCH	e		0.5 BSC	
EP SIZE	X	J	3.4	3.5
	Y	K	3.4	3.5
LEAD LENGTH	L	0.35	0.4	0.45
PACKAGE EDGE TOLERANCE	aaa		0.1	
MOLD FLATNESS	bbb		0.1	
COPLANARITY	ccc		0.08	
LEAD OFFSET	ddd		0.1	
EXPOSED PAD OFFSET	eee		0.1	

NOTES
1.0 COPLANARITY APPLIES TO LEADS, CORNER LEADS AND DIE ATTACH PAD.

ASE Group		PROJ.	DWG. NO.	REV.
TITLE: PACKAGE OUTLINE			98A0032QN048	0
32 LD QFN EXPOSED PAD				
5 X 5 X 0.9 PKG. 0.5 PITCH				
			SHEET	SIZE
			1 OF 2	A4
UNIT	DIMENSION AND TOLERANCES	REFERENCE DOCUMENT		
MM	ASME Y14.5M	---		

Reason for Change:

Assembly and test are being consolidated in our volume assembly and test supplier in order to ensure continuity of supply.

Anticipated Impact on Form, Fit, Function, Quality or Reliability:

No change

Product Affected:

Device	Cirrus Logic Part Number
1	WM8983GEFL/RV
2	WM8983GEFL/V

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Changes To Product Identification Resulting From This PCN:

CURRENT MARKING	NEW MARKING
	

Qualification Data:

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

Qualification Complete	March 2016	Status:	PASSED
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CIRRUS LOGIC®

Reliability Engineering Interim Qualification Report

WM8983GEFL

Wafer Fabrication – Chartered Semiconductor Manufacturing Ltd: Fab 2
Package Assembly – ASE Chungli, QFN32 (5x5x0.9)



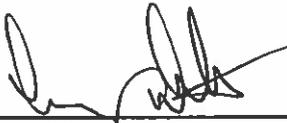
Russell McMillan, Senior Reliability Engineer

Date : 28/10/15



Dan Liu, Senior Reliability Engineer

Date : 28/10/15



Gary Morton, Manager of Supply Chain PTE

Date : 6/11/15.



Andrew McLean, Director of Quality

Date : 29/10/15

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Summary

The WM8983GEFL device is being tested to Cirrus product qualification requirements.

Silicon level reliability

- 1000 hours of High Temperature Operating Life (HTOL) testing.
- Electrostatic Discharge (ESD) testing.
- Latch-Up testing.

The package level reliability was qualified by similarity to the WM8758BGEFL device which is assembled in an ASE Chungli QFN32 (5x5x0.9) package.

Package level reliability

- 1000 hours of High Temperature Storage (HTS) testing.
- 96 hours of Highly Accelerated Temperature and Humidity Stress Test (HAST) testing.
- Moisture Sensitivity Level (MSL) testing at MSL 3 and subsequent Temperature Cycling for 1000 cycles.

Reliability Test Results

Test Lots: (1) 9905.\$1 (53AABV3)
 (2) 9905.\$2 (54AABV3)
 (3) 10319 (55AAUY9)
 (4) 22651 (04AAMGT)

Silicon Level Tests

Stress Test	Test Conditions	JESD22 Spec	Pre-condition	Test Duration	Fails/Passes (Lot)
High Temperature Operating Life (HTOL) testing	125°C V1= 5.5V V2=3.6V Dynamic	A108	-	1000 hours	0/40(1) 0/39(2)
Electrostatic Discharge (ESD) Sensitivity Testing Human Body Model (HBM)	>= Class 2 ESD pulse of 2000V HBM	A114	-	-	0/3 (3)
Electrostatic Discharge (ESD) Sensitivity Testing Machine Model (MM)	>= Class B ESD pulse of 200V MM	A115	-	-	0/3 (3)
IC Latch-Up Test	Class II Level A +/-100mA Current Injection and 1.5xMax Vsupply Overvoltage	JESD78	-	-	0/3 (3)

Package Level Tests

Stress Test	Test Conditions	JESD22 Spec	Pre-condition	Test Duration	Fails/Passes (Lot)
High Temperature Storage (HTS) testing	150°C No bias	A103	-	1000 hours	0/77 (4)
Highly Accelerated Temperature and Humidity Stress Test (HAST)	130°C, 85% R.H. 230kPa[33.3psi] V1= 3.6V	A110	(a)	96 hours	0/77 (4)
Moisture Sensitivity Level (MSL) testing	MSL 3 (Peak IR reflow temperature = 260°C)	J-STD-020	-	-	0/77 (4)
Temperature Cycling	-65°C to +150°C Transfer time < 1 minute Soak time > 10 minutes	A104	(a)	1000 cycles	0/77 (4)

(a) Pre-condition: JEDEC Moisture Sensitivity Level 3 (JESD22 – A113)

Revision History

Revision	Date	Originator	Change
1.0	28/10/2015	Russell McMillan	Initial release