



Process Change Notification Form

PCN Number:	PCN_0291_Addendum
Date of Notification:	February 8, 2010
Cirrus Logic P/N(s):	CS497004-CQZ(R), CS497014-CVZ(R), CS497024-CVZ(R)
Date PCN Effective:	March 26, 2010 Contact Sales for specific availability
Reason for Change:	<input checked="" type="checkbox"/> Design /New Rev. <input checked="" type="checkbox"/> Fab Site <input type="checkbox"/> Fab Process <input type="checkbox"/> Additional Fab Source <input type="checkbox"/> Assembly Site <input type="checkbox"/> Assembly Process <input type="checkbox"/> Additional Assembly Source <input type="checkbox"/> Other (specify) The fabrication site is transferring this process from one site to another. The current site will no longer maintain this technology process.
Description of Change:	<input type="checkbox"/> Fix errata <input type="checkbox"/> Yield enhancement <input type="checkbox"/> Fix known bug <input type="checkbox"/> Performance Improvement <input checked="" type="checkbox"/> Other Chartered Semiconductor (now Global Foundries) is transferring the fabrication process used for these devices from Fab 6 to Fab 5. Cirrus will transfer these devices to Fab 5 with an optical shrink to improve manufacturability / capacity.
Cirrus Logic P/N Change:	<input type="checkbox"/> Yes, New Part Number: <input checked="" type="checkbox"/> No
Pack Mark Change:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If Yes, briefly explain:</i> Silicon revision identifier will change from C0 to D0. Correction made to PCN_0291 for addendum PCN_0291_Addendum Fab identifier will change from RG to CC. <div style="text-align: center;"> RGWAC0xxyyww to CCWAD0xxyyww </div> <i>[Any Fab, Assembly, or Design changes results in pack mark changes, please provide detail]</i>
Lot Effective Date:	0904 <i>[Contact the area sales representative for availability of samples if applicable]</i>
Quality & Reliability impact:	Qualification Data: <input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required ***See pages below***
Datasheet Change Required?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, briefly explain: Note may remove auto grade
Software Change Required?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, briefly explain:

**RELIABILITY
QUALIFICATION
REPORT**

Report Date: 2/4/2010

Page 1 of 3

Reliability Report: QRR100202

Subject/Purpose: This is to qualify the 0.16/0.18 um process node process manufactured at Chartered Semiconductor Fab 5 (CC) in the Pb-free 48, 128 and 144LQFP packages at Siliconware (Taiwan) by similarity.	APPROVALS: _____ Rod Boutwell Reliability Engineering
Results: Qualification successful.	STATUS: Complete - Pass

<u>Stress</u>	<u>Conditions</u>	<u>Method</u>	<u>Duration</u>	<u>Lot</u>	<u>Results (Fail/Sample)</u>
ELFR	125 °C	JESD22-A108	48 Hours	1	0/704
QJ1779 (Similarity)	3.5 Volts				
QJ1868 (Similarity)	1.95 Volts		48 Hours	2	0/792
QJ1897	Dynamic		48 Hours	3	0/810

Background Information:

Part #: CS495304
Package: 128LQFP

Rev: D0

Fab: Chartered Fab 5 (CC)
Assembly: Siliconware (Taiwan)

Lead Finish: Pb-free

Prepared by: Rod Boutwell

CONFIDENTIAL

RELIABILITY QUALIFICATION REPORT

Report Date: 2/4/2010

Page 2 of 3

Reliability Report: QRR100202

<u>Stress</u>	<u>Conditions</u>	<u>Method</u>	<u>Duration</u>	<u>Lot</u>	<u>Results (Fail/sample)</u>
HTOL	125 °C	JESD22-A108	48 Hours	1	0/77
QJ1779 (Similarity)	3.5 Volts		500 Hours	1	0/77
QJ1782 (Similarity)	1.95 Volts		1000 Hours	1	0/77
QJ1897	Dynamic				
			48 Hours	2	0/77
			500 Hours	2	0/77
			1000 Hours	2	0/77
			500 Hours	3	0/77
ESD Machine Model	25 °C	JESD22-A115	50 Volts	1	0/3
QJ1779 (Similarity)			100 Volts	1	0/3
			150 Volts	1	0/3
ESD Human Body Model	25 °C	JESD22-A114	500 Volts	1	0/3
QJ1779 (Similarity)			1000 Volts	1	0/3
			1500 Volts	1	0/3
			2000 Volts	1	0/3
Latch-Up VDD	85 °C	JESD78	5.25 Volts	1	0/6
QJ1779 (Similarity)			2.85 Volts	1	0/6
Latch-Up I/O	85 °C	JESD78	+/-200 mA	1	0/6
QJ1779 (Similarity)					
Precondition MSL-3	24HR 125 °C Bake	JESD22-A113	Precondition	1	0/231
QJ1778 (Similarity)	192HR 30°C/60%RH Soak				
QJ1780 (Similarity)	3 pass 260 °C Convection		Precondition	2	0/231
QJ1781 (Similarity)	reflow		Precondition	3	0/231
HAST	130 °C	JESD22-A110	96 Hours	1	0/77
QJ1778 (Similarity)	85 %RH				
	1.95 Volts				
	3.5 Volts				
THB	85 °C	JESD22-A101	500 Hours	1	0/77
QJ1780 (Similarity)	85 %RH		1000 Hours	1	0/77
QJ1781 (Similarity)	1.95 Volts				
	3.5 Volts		500 Hours	2	0/77
			1000 Hours	2	0/76

Background Information:

Part #: CS495304
Package: 128LQFP

Rev: D0

Fab: Chartered Fab 5 (CC)
Assembly: Siliconware (Taiwan)

Lead Finish: Pb-free

Prepared by: Rod Boutwell

CONFIDENTIAL

RELIABILITY QUALIFICATION REPORT

Report Date: 2/4/2010

Page 3 of 3

Reliability Report: QRR100202

<u>Stress</u>	<u>Conditions</u>	<u>Method</u>	<u>Duration</u>	<u>Lot</u>	<u>Results (Fail/sample)</u>
Temperature Cycle cond. C	-65 °C	JESD22-A104	500 Cycles	1	0/77
QJ1778 (Similarity)	+150 °C				
QJ1780 (Similarity)	air to air		500 Cycles	2	0/77
QJ1781 (Similarity)			500 Cycles	3	0/77
Tomography (CSAM)		J-STD-035	Post Temp Cycle	1	0/11
QJ1778 (Similarity)					
QJ1780 (Similarity)			Post Temp Cycle	2	0/11
QJ1781 (Similarity)			Post Temp Cycle	3	0/11
Autoclave/PPOT	121 °C	JESD22-A102	96 Hours	1	0/77
QJ1778 (Similarity)	15 psig				
QJ1780 (Similarity)	100% R.H.		96 Hours	2	0/77
QJ1781 (Similarity)			96 Hours	3	0/77
Solderability	93 °C steam aging	JESD22-B102	Solderability	1	0/15
QJ1778 (Similarity)	8 Hours				
QJ1780 (Similarity)	245 °C solder bath		Solderability	2	0/15
QJ1781 (Similarity)	5 Seconds		Solderability	3	0/15
HTSL (High Temp Storage Life)	150 °C	JESD22-A103	500 Hours	1	0/77
QJ1778 (Similarity)			1000 Hours	1	0/77
QJ1780 (Similarity)			500 Hours	2	0/77
QJ1781 (Similarity)			1000 Hours	2	0/77
			500 Hours	3	0/77
			1000 Hours	3	0/77

Background Information:

Part #: CS495304

Rev: D0

Fab: Chartered Fab 5 (CC)

Lead Finish: Pb-free

Package: 128LQFP

Assembly: Siliconware (Taiwan)

Prepared by: Rod Boutwell

CONFIDENTIAL

Cirrus Logic PCN administrator: _____

Acknowledgement of Receipt of Notice:

Does customer waive PCN Effective Date? YES NO

Company Name: _____

Name (please print): _____ Title: _____

Signature: _____ Date: _____

Customer Representative is to obtain the customer acknowledgement/signature and return this notification to Cirrus Logic Corp. Quality, attn: PCN administrator at fax number (512) 851-4656

***NOTE: Lack of acknowledgement within 30 days of the date of notice, constitutes acceptance of change.
(Reference JEDEC Industry Standard: JESD-46)***