Integrated Device Technology, Inc.
6024 Silver Creek Valley Road
San Jose, CA 96138

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **W1101-02R1** DATE: **August 13, 2012**
Product Affected: Refer Attachment II

Date Effective: **September 13, 2012**

MEANS OF DISTINGUISHING CHANGED DEVICES:
- ■ Product Mark Assembly lot# and Date Code
- ☐ Back Mark
- ☐ Date Code
- ☐ Other

Contact: Bimla Paul
Title: Product Quality Assurance
Phone #: (408) 574-6419
Fax #: (408) 284-8362
E-mail: Bimla.Paul@idt.com

Attachment: ■ Yes ☐ No

Samples: Available upon request

DESCRIPTION AND PURPOSE OF CHANGE:

- ☐ Die Technology
- ☐ Wafer Fabrication Process
- ☐ Assembly Process
- ☐ Equipment
- ☐ Material
- ☐ Testing
- ■ Manufacturing Site
- ☐ Data Sheet
- ☐ Other

Revision 1: This revised notification is to add part# 1337GNLGI & 1337GNLGI8 in the affected part# list.

This is to notify our customers that IDT has successfully transferred the wafer fabrication from IDT Hillsboro, Oregon (Fab 4) to Taiwan Semiconductor Manufacturing Corporation (TSMC).

There is no expected change to the data sheet, package or backend manufacturing process.

IDT Hillsboro, Oregon (Fab 4) is no longer in production and all future wafer fabrication will be at TSMC Fab.

Attachment I details the qualification data for this change
Attachment II details the affected part number list.

RELIABILITY/QUALIFICATION SUMMARY:

Based on wafer and component level qualification and characterization tests, there is no change to the performance or reliability of the product.

CUSTOMER ACKNOWLEDGMENT OF RECEIPT:

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.
IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

Customer: _____ ☐ ***Approval for shipments prior to effective date.***

Name/Date: _____ E-Mail Address: _____

Title: _____ Phone# /Fax# : _____

CUSTOMER COMMENTS: _____

IDT ACKNOWLEDGMENT OF RECEIPT:

RECD. BY: _____ DATE: _____

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ATTACHMENT I - PCN # : W1101-02R1

PCN Type: Wafer Fab Manufacturing Site Change - IDT Fab 4 to TSMC

Data Sheet Change: None

Detail Of Change:

This is to notify our customers that IDT has successfully transferred the wafer fabrication from IDT Hillsboro, Oregon (Fab 4) to Taiwan Semiconductor Manufacturing Corporation (TSMC).

There is no expected change to the data sheet, package or backend manufacturing process.

IDT Hillsboro, Oregon (Fab 4) is no longer in production and all future wafer fabrication will be at TSMC Fab.

Please refer to Attachment II for affected part# list.

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PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT I - PCN # : W1101-02R1

Qual Plan & Results:

TSMC Transfer Qualification Test Result Summary

Technology Information: 0.18 µm **Fab Location: TSMC Fab 8**

Technology Qualification Vehicle Test Summary – JESD47 Recommended Tests

Test / Conditions	Lead Vehicle: 6V40107 (AT294)
	Sample Size / Rejects/ each lot
High Temperature Operating Life (Dynamic) JESD22-A108B, +125°C @ 1000 hours or equivalent	77 / 0 77 / 0 77 / 0
Temperature Cycle JESD22-A104B, -55°C -/125°C, 1000 cycles	25 / 0 25 / 0 25 / 0
High Temperature Storage Bake JESD22-A-103-B, 150°C, 1000 hrs	25 / 0 25 / 0 25 / 0
ESD: Human Body Model JESD22-A114F , >2000V	3 / 0
ESD: Charged Device Model JEDEC 22-101C, >500V	3 / 0
Latch-up JESD78B	6 / 0
Electrical Characterization per Datasheet conditions	Pass

Technology Qualification Vehicle Test Summary – Supplemental Tests

Test / Conditions	Lead Vehicle: : 6V40107 (AT294)
	Sample Size / Rejects/ each lot
Ball Shear Test JESD22-B116-A, Ball Shear Strength > 5.7g	5 / 0 5 / 0 5 / 0
Highly Accelerated Stress Test (HAST) EIA/JESD22-A110B, 130°C/85%R.H. Vcc max for 100 hours.	25 / 0 25 / 0 25 / 0
Autoclave EIA/JESD22-A102C, 168hrs @ 2 ATM, Saturated Steam @ 121°C	25 / 0 25 / 0 25 / 0

Note: For HAST, Autoclave and Temperature Cycle, samples have been subjected to pre-conditioning per JESD22-A113

PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT I - PCN # : W1101-02R1

Qual Plan & Results:

TSMC Transfer Qualification Test Result Summary

Technology Information: 0.18 µm, 3.3 V **Fab Location: TSMC Fab 8**

Technology Qualification Vehicle Test Summary – JESD47 Recommended Tests

Test / Conditions	Lead Vehicle: 9LPRS387 (AP298) Sample Size / Rejects/ each lot
High Temperature Operating Life (Dynamic) JESD22-A108B, +125°C @ 1000 hours or equivalent	77 / 0 77 / 0 77 / 0
Temperature Cycle JESD22-A104B, -55°C -/125°C, 1000 cycles	45 / 0 45 / 0 45 / 0
High Temperature Storage Bake JESD22-A-103-B, 150°C, 1000 hrs	77 / 0 77 / 0 77 / 0
ESD: Human Body Model JESD22-A114F	5 / 0
ESD: Charged Device Model JEDEC 22-101C	5 / 0
ESD: Machine Model JESD22-A115B	5 / 0
Latch-up JESD78B	6 / 0
Electrical Characterization per Datasheet conditions	10

Technology Qualification Vehicle Test Summary – Supplemental Tests

Test / Conditions	Lead Vehicle: 9LPRS387 (AP298) Sample Size / Rejects/ each lot
Ball Shear Test JESD22-B116-A, Ball Shear Strength > 5.7g	5 / 0 5 / 0 5 / 0
Highly Accelerated Stress Test (HAST) EIA/JESD22-A110B, 130°C/85%R.H. Vcc max for 100 hours.	45 / 0 45 / 0 45 / 0
Autoclave EIA/JESD22-A102C, 168hrs @ 2 ATM, Saturated Steam @ 121°C	45 / 0 45 / 0 45 / 0

Note: For HAST, Autoclave and Temperature Cycle, samples have been subjected to pre-conditioning per JESD22-A113

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PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT II - PCN # : W1101-02R1

Affected Part Number

Part Number	Part Number	Part Number	Part Number
1337ACSRI	1338-18DVGI8	1338C-31SRI	1339A-31DVGI8
1337ACSRI8	1338-31DCGI	1338C-31SRI8	1339AC-31SRI
1337GCSRI	1338-31DCGI8	1339-2DCGI	1339AC-31SRI8
1337GCSRI8	1338-31DVGI	1339-2DCGI8	1339C-2SRI
1337GDCGI	1338-31DVGI8	1339-2DVGI	1339C-2SRI8
1337GDCGI8	1338A-31DVGI	1339-2DVGI8	1339C-31SRI
1337GDVGI	1338A-31DVGI8	1339-31DCGI	1339C-31SRI8
1337GDVGI8	1338AC-31SRI	1339-31DCGI8	5P90005CDCGI
1338-18DCGI	1338AC-31SRI8	1339-31DVGI	5P90005CDCGI8
1338-18DCGI8	1338C-18SRI	1339-31DVGI8	1337GNLGI
1338-18DVGI	1338C-18SRI8	1339A-31DVGI	1337GNLGI8