Integrated Device Technology, Inc.
6024 Silver Creek Valley Road, San Jose, CA - 95138

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A-0511-01** DATE: **11/21/2005**
Product Affected: VFQFP-N packages
(See attached affected part # list)

Date Effective: **12/22/2005**

MEANS OF DISTINGUISHING CHANGED DEVICES:
☐ Product Mark
☒ Back Mark Lot # will have "L" prefix
☐ Date Code
☐ Other

Contact: Geoffrey Cortes
Title: Corporate Quality & Reliability
Phone #: (408) 284-8321
Fax #: (408) 284-1450
E-mail: Geoffrey.Cortes@idt.com

Attachment: ☒ Yes ☐ No

Samples: Please contact your local sales representative for sample request & availability.

DESCRIPTION AND PURPOSE OF CHANGE:

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

This notification is to advise our customers that IDT VFQFP-N black and green packages currently assembled at ASAT-Hong Kong facility will be transferred to ASAT-Dong Guan, China.

Attachment 1 outlines the qualification data
Attachment 2 shows the affected part number list

RELIABILITY/QUALIFICATION SUMMARY:

There is no expected change to the product quality or reliability performance.

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 1 - PCN # : A-0511-01

PCN Type: Manufacturing Site

Data Sheet Change: None.
No change in moisture sensitivity levels (MSL)

Detail Of Change:

This notification is to advise our customers that IDT VFQFP-N black and green packages currently assembled at ASAT-Hong Kong facility will be transferred to ASAT-Dong Guan, China. ASAT-Dong Guan will use the same qualified assembly material (mold compound, die attach, bond wire etc.), assembly equipment, assembly process, and plating chemistry for Sn/Pb and Pb-Free plating as ASAT-Hong Kong. There is also no change in current moiustre classification level (MSL). Therefore, the assembly transfer is not expected to have any adverse impact on the product quality or reliability.

Attachment 1 outlines the qualification data
Attachment 2 shows the affected part number list

During the transition period, IDT will continue to support customer shipments with inventory built at ASAT-Hong Kong facility or previously qualified assembly subcontractors and does not anticipate any impact on the product availability.

ATTACHMENT 1 - PCN # : A-0511-01

Qualification Test Results:
Test Vehicles: **24L and 64L Pb-Free VFQFP-N**

Test Description	Test Method	Sample Size / # of Fails	Test Results (SS/Rej)
* Temperature Cycling (Cond B, 1000 cycles)	JESD22-A104-B	45/0	45/0
* Unbiased HAST (130°C, 85% RH, 100 hours)	JESD22-A102-C	45/0	45/0
High Temperature Stabilization Bake (150 °C, 1000 hours)	JESD22-A108-B	77/0	77/0

Notes: * Test requires moisture pre-conditioning sequence per JESD22-A113C.

Test Vehicles: **28L, 56L and 68L (Pb-Free) VFQFP-N**

Test Description	Test Method	Sample Size / # of Fails	Test Results (SS/Rej)
Moisture Sensitivity Classification, L3	J-STD-020B	90/0	90/0
Internal Visual Inspection	MIL-STD-883, M2010	5/0	5/0
External Visual Inspection	JESD22-B101	25/0	25/0
X-ray Examination	MIL-STD-883, M2015	45/0	45/0
Bond Pull Test	MIL-STD-883, M2011	5/0	5/0
Resistance To Solvents	JESD22-B107C	3/0	3/0
Solderability Test	JESD22-B102D	5/0	5/0
Bake & Ball Shear Strength	JESD22-B116	5/0	5/0
Physical Dimensions	JESD22-B100-B	5/0	5/0
Die Shear Strength	MIL-STD-883, M2019	5/0	5/0

Tin Whisker Evaluation Test Results
Test Vehicles: **48L (Pb Free) VFQFP-N**

Test Description	Test Condition	Test Duration	Spec Limits	Test Results (SS/Rej)
Storage Test	25°C/30% - 80% RH	0, 1000, 2000 hours	40μm max.	9/0
Aging	60°C / 90% RH	0, 1000, 2000 hours	40μm max.	9/0
Temperature Cycling	-55°C to +85°C	0, 500 cycles	40μm max.	9/0

ATTACHMENT 2 - PCN # : A-0511-01

Affected Part Number List

- IDT5T2010NLGI
- IDT5T2010NLI
- IDT5T2110NLGI
- IDT5T2110NLI
- IDT5T929-10NLI
- IDT5T929-30NLI
- IDT5T9306NLI
- IDT5T9310NLI
- IDT5T9316NLI
- IDT5T93GL06NLGI
- IDT5T93GL06NLI
- IDT5T93GL10NLGI
- IDT5T93GL10NLI
- IDT5T93GL16NLI
- IDT5T940-10NLI
- IDT5T940-30NLI
- IDT5T9820NLGI
- IDT5T9820NLI
- IDT5T9821NLGI
- IDT5T9821NLI
- IDT5T9890NLGI
- IDT5T9890NLI
- IDT5T9891NLGI
- IDT5T9891NLI
- IDT5V2305NRI
- IDT5V2310NRI
- IDT5V9885KNLGI
- IDT5V9885NLGI
- IDT74SSTV16859NL
- IDT74SSTV16859NLG
- IDT74SSTVF16859NL
- IDT74SSTVF16859NLG
- IDT74SSTVN16859CNLG
- IDT74SSTVN16859NL
- IDT74SSTVN16859NLG
- IDTCSPT857CNL
- IDTCSPT857CNLG
- IDTCSPT857DNL
- IDTCSPT857DNLG
- IDTCSPU877ANL
- IDTCSPU877ANLG
- IDTCSPU877DNLG
- IDTCSPU877NL
- IDTCV145NLG
- IDTCV150NLG
- IDTCV153NLG
- IDTCV155NLG
- IDTCV164NLG
- IDTCV168NLG
- IDTCV171NLG