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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A1509-01** DATE: **2-Oct-2015**

Product Affected: PDIP-28
Refer to Attachment II for the affected part numbers

Date Effective: **2-Jan-2016**

MEANS OF DISTINGUISHING CHANGED DEVICES:

- ☐ Product Mark
- ■ Back Mark
- ☐ Date Code
- ☐ Other

Lot # will have:
"V" prefix for MMT, Thailand

Contact: IDT PCN DESK

E-mail: pcndesk@idt.com

Attachment: ■ Yes ☐ No

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

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 is adding Millennium Microtech (MMT), Thailand as the alternate Assembly facility.

There is no change to the moisture performance.

Attachment I details the qualification data for this change and Attachment II shows the affected list of part numbers.

RELIABILITY/QUALIFICATION SUMMARY:

Refer to qualification data shown in Attachment I.

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 # : A1509-01

PCN Type: Manufacturing Site - Alternate Assembly Location

Data Sheet Change: None

No change in moisture sensitivity level (MSL)

Detail Of Change:

This notification is to advise our customers that IDT is adding MMT, Thailand as the alternate Assembly facility.

The material set details of the current and alternate assembly location is as shown in Table 1. The die attach and mold compound used at the alternate assembly are qualified IDT materials. There is no change from the existing qualified lead frame material, lead finish, and wire for the alternate assembly location.

There is no change to the moisture performance.

Table 1: Assembly Material Sets for The Existing and Alternate Assembly Location

	Existing Assembly (Amkor, Philippines)	Alternate Assembly (MMT, Thailand)
Die Attach	8390A	CRM1064L
Wire	Au wire	Au wire
Mold Compound	CK5000A	GE800

Qualification Information and Qualification Data:

Affected Packages: PDIP-28

Assembly Material: The affected package type is using MMT standard materials shown on page 2 of this attachment.

Qual Plan & Results: Tests are in accordance with JEDEC47 recommended tests.

Qualification Vehicle: PDIP-28

Test Description	Test Method	Test Results (Rej / SS)		
		Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25
* HAST - unbiased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25
Physical Dimensions	JESD22-B100	0/25	0/25	0/25

* Tests were subjected to Preconditioning per JESD22-A113 prior to stress test

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ATTACHMENT II - PCN # : A1509-01

Affected Part Numbers

Part Number	Part Number	Part Number	Part Number
71256SA12TPG	7204L12TPG	7201LA12TPG	7164L20TPGI
7201LA35TPG	7205L12TPG	71256SA15TPG	7164S20TPG
7201LA50TPG	7205L15TPGI	71256SA15TPGI	7164S20TPGI
7202LA12TPG	7206L15TPG	71256SA20TPG	7164S25TPG
7202LA15TPGI	7206L20TPGI	71256SA20TPGI	7200L12TPG
7203L12TPG	72200L10TPG	71256SA25TPG	7200L15TPGI
7203L15TPGI	7201LA25TPG	71256SA25TPGI	72240L10TPG

Package Comparizon between Current and Alternate New Assembly

		Current Site	New Site	Comment
	Pkg and Si Attribute	**ATP**	**MMT**	
Pkg	Pkg type	PTG28	PTG28	No change
	Pkg x & y (inches)	Package Length: 1.365 ± 0.02 & Package width: 0.285 ± 0.010	Package length: 1.375 (min), 1.385 (max), Package width: 0.279 (min), 0.289 (max)	Within IDT POD specification.
	Pkg z (inches)	Min: 0.120, Max: 0.150	Min: 0.125, Max: 0.135	Within IDT specification.
	Max Voltage	NA	NA	NA
	Capacitors	NA	NA	NA
Silicon & FLI	Si Process	No change	No change same wafer	No change
	Wafer Size	No change	No change same wafer	No change
	Die size (mm2)	No change	No change same wafer	No change
	Die Aspect Ratio	No change	No change same wafer	No change
	Die thickness (mils)	No change	No change same wafer	No change
	Polyimide (Y/N)	No change	No change same wafer	No change
	Silicon Metal Layers	No change	No change same wafer	No change
	Scribe Width (um)	No change	No change same wafer	No change
	UBM source	No change	No change same wafer	No change
	Silicon UBM Stack-up	No change	No change same wafer	No change
	Bump source	No change	No change same wafer	No change
	Bump pitch I/O & Core (um)	No change	No change same wafer	No change
	Total Bump count	No change	No change same wafer	No change
	Bump Diameter	No change	No change same wafer	No change
	Bump Height	No change	No change same wafer	No change
	Bump Metallurgy	No change	No change same wafer	No change
	Wafer Bump Flux	No change	No change same wafer	No change
	CAM Flux	No change	No change same wafer	No change
	Underfill Material	No change	No change same wafer	No change
	Silicon UBM/SRO	No change	No change same wafer	No change
Substrate	Halogen Free ?	NA	NA	NA
	Substrate Layers	NA	NA	NA
	Substrate thickness	NA	NA	NA
	Core thickness (um)	NA	NA	NA
	Core Material	NA	NA	NA
	Outer layer Lines/space (um)	NA	NA	NA
	Bump Pre-solder (SOP)	NA	NA	NA
	Bump presolder (SOP) height/diameter	NA	NA	NA
	Bump Capture Pad/SRO IO (um)	NA	NA	NA
	Substrate Ball Capture Pad/SRO (um)	NA	NA	NA
	Number of PTH/M1-M2 uVias	NA	NA	NA
	Core PTH/Capture pad (um)	NA	NA	NA
	Substrate Design Rule & BOM	NA	NA	NA
	Substrate Supplier	NA	NA	NA
	Build up layer (thickness)	NA	NA	NA
	Solder mask (thickness)	NA	NA	NA
	C1 & C4 thickness (plate)	NA	NA	NA
	C2 & C3 thickness (foil + plate)	NA	NA	NA
	Surface finish (thickness)	NA	NA	NA
SLI	2nd level Ball count	NA	NA	NA
	2nd level BA Flux	NA	NA	NA
	2nd Ball Dia (mm)	NA	NA	NA
	2nd level metallurgy	NA	NA	NA
	2nd level ball pitch (mm)	NA	NA	NA