



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

## PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A1401-02**                      Date: February 17, 2014  
Product Affected: TQFP-32 & TQFP-52  
(Standard & Green)

MEANS OF DISTINGUISHING CHANGED DEVICES:  
 Product Mark                      Lot # will have a "P" for ATP or "RC" prefix for  
 Back Mark                              ASEC and suffix "Y" to denote Copper bonding  
 Date Code                                wire.  
 Other

Date Effective: May 17, 2014

Contact: IDT PCN DESK

Attachment:  Yes                       No

E-mail: [pcndesk@idt.com](mailto:pcndesk@idt.com)

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

**DESCRIPTION AND PURPOSE OF CHANGE:**

- |   |   |
|---|---|
| <input type="checkbox"/> Die Technology<br><input type="checkbox"/> Wafer Fabrication Process<br><input type="checkbox"/> Assembly Process<br><input type="checkbox"/> Equipment<br><input checked="" type="checkbox"/> Material<br><input type="checkbox"/> Testing<br><input checked="" type="checkbox"/> Manufacturing Site<br><input type="checkbox"/> Data Sheet<br><input type="checkbox"/> Other | <p>This notification is to advise our customers that IDT is adding Amkor, Philippines (ATP) and ASE Chungli, Taiwan (ASEC) as alternate Copper wire bond assembly facilities.</p> <p>Please refer to Attachment 1 for the qualification summary and material set details.<br/>Please refer to Attachment 2 for affected part# list.</p> |
|---|---|

**RELIABILITY/QUALIFICATION SUMMARY:**

Qualification has been successfully completed. There is no change in MSL rating.

**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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## PRODUCT/PROCESS CHANGE NOTICE (PCN)

### ATTACHMENT 1 - PCN # : A1401-02

**PCN Type:** Alternate Assembly Location & Gold Wire to Copper Wire

**Data Sheet Change:** N/A

**Detail Of Change:**

This notification is to advise our customers that IDT is adding Amkor, Philippines (ATP) and ASE Chungli, Taiwan (ASEC) as alternate Copper wire bond assembly facilities.

The material set details of the current Assembly location of this package is shown in the tables below. The die attach, mold compound and bonding wire used at the alternate assembly sites are qualified IDT materials. There is no change from the existing qualified lead frame material and lead finish for these alternate assembly sites.

TQFP-32 & TQFP-52 - Qualified Material Sets, by Assembly Subcontractor

	Existing	Alternate	
Material Set / Assembly	PTU - Unisem Batam, Indonesia	ATP - Amkor, Philippines	ASEC - ASE Chungli, Taiwan
Die Attach	CRM1076NS	Ablestik 3230	Hitachi EN4900G
Bonding Wire	Copper	Copper	Copper
Mold Compound	G700LX	G700LS	G700LY



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### ATTACHMENT 1 - PCN # : A1401-02

#### Qualification Information and Qualification Data:

**Affected Packages:** TQFP-32 & TQFP-52 (Standard & Green)

**Assembly Material:** The affected package type is using the respective subcon standard materials as shown on page 1 of this attachment. Qualification testing was completed on the worse case package.

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

#### (i) Cu Wire Qualification Data: ATP

##### Qualification Vehicle: TQFP-32 (3 lots)

Test Description	Test Method	Test Results (Rej/SS)		
		Lot 1	Lot 2	Lot 3
<sup>1</sup> HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0 / 30	0 / 30	0 / 30
<sup>1</sup> Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0 / 30	0 / 30	0 / 30
High Temperature Storage Test (150°C, 1000 hours)	JESD22-A103	0 / 30	0 / 30	0 / 30
Ball Shear Test	JESD22-B116	0 / 5	0 / 5	0 / 5
Bond Pull Test	MIL-STD-883, M 2011	0 / 5	0 / 5	0 / 5
X-ray Examination	MIL-STD-883, M 2015	0 / 45	0 / 45	0 / 45

Notes: 1. HAST and Temperature Cycle were subjected to Preconditioning per JESD22-A113 for MSL 3.

#### (ii) Cu Wire Qualification Data: ASEC

##### Qualification Vehicle: TQFP-32 (3 lots)

Test Description	Test Method	Test Results (Rej/SS)		
		Lot 1	Lot 2	Lot 3
<sup>1</sup> HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0 / 30	0 / 30	0 / 30
<sup>1</sup> Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0 / 30	0 / 30	0 / 30
High Temperature Storage Test (150°C, 1000 hours)	JESD22-A103	0 / 30	0 / 30	0 / 30
Ball Shear Test	JESD22-B116	0 / 5	0 / 5	0 / 5
Bond Pull Test	MIL-STD-883, M 2011	0 / 5	0 / 5	0 / 5
X-ray Examination	MIL-STD-883, M 2015	0 / 45	0 / 45	0 / 45

Notes: 1. HAST and Temperature Cycle were subjected to Preconditioning per JESD22-A113 for MSL 3.



## PRODUCT/PROCESS CHANGE NOTICE (PCN)

### ATTACHMENT 2 - PCN # : A1401-02

#### Affected Part Numbers

Part Number	Part Number	Part Number	Part Number
5T93GL061PFGI	83918AYIT	84021AYLF	843202AYILF
5T93GL061PFGI8	83940AY-02	84021AYLFT	843202AYILFT
5T93GL061PFI	83940AY-02LF	84021AYT	84320AY-01
5T93GL061PFI8	83940AY-02LFT	84021BYLF	84320AY-01LN
5T9950APFGI	83940AY-02T	84021BYLFT	84320AY-01LNT
5T9950APFGI8	83940BY	8402AYILF	84320AY-01T
5T9950PFGI	83940BYLF	8402AYILFT	84320AYI-01
5T9950PFGI8	83940BYLFT	8402AYLF	84320AYI-01LF
5V9351PFGI	83940BYT	8402AYLFT	84320AYI-01LFT
5V9351PFGI8	83940DY-01	8427DY-02	84320AYI-01T
5V9351PFI	83940DY-01LF	8427DY-02LF	84321AY
5V9351PFI8	83940DY-01LFT	8427DY-02LFT	84321AYLF
5V9352PFGI	83940DY-01T	8427DY-02T	84321AYLFT
5V9352PFGI8	83940DYI-01LF	843020AY-01	84321AYT
5V9352PFI	83940DYI-01LFT	843020AY-01LF	84329BYLF
5V9352PFI8	83940DYILF	843020AY-01LFT	84329BYLFT
5V994PFGI	83940DYILF-MER	843020AY-01T	8432BY-51
5V994PFGI8	83940DYILFT	8430AY-61	8432BY-51LF
5V994PFI	83940DYILFT-MER	8430AY-61LF	8432BY-51LFT
5V994PFI8	83940DYLF	8430AY-61LFT	8432BY-51T
5V994PFI9	83940DYLFT	8430AY-61T	8432BYI-51
5V9950PFGI	83940LYI	8430AY-62	8432BYI-51LF
5V9950PFGI8	83940LYILF	8430AY-62LF	8432BYI-51LFT
5V9950PFI	83940LYILFT	8430AY-62LFT	8432BYI-51T
5V9950PFI8	83940LYIT	8430AY-62T	8432CY-11
5V9950PFI9	83947AYI	8430AYI-61LF	8432CY-111
8312AY	83947AYI-147LF	8430AYI-61LFT	8432CY-111LF
8312AYI	83947AYI-147LFT	8430AYI-71	8432CY-111LFT
8312AYILF	83947AYILN	8430AYI-71T	8432CY-111T
8312AYILFT	83947AYILNT	8430BY-71LF	8432CY-11LF
8312AYIT	83947AYIT	8430BY-71LFT	8432CY-11LFT
8312AYLF	83947AYIT-IB0	8430BYI-71LF	8432CY-11T
8312AYLFT	83948AYI	8430BYI-71LFT	8432CY-51LF
8312AYT	83948AYI-01	8430DY-111LF	8432CY-51LFT
8343AY-01	83948AYI-01LF	8430DY-111LFT	8432CYI-51LF
8343AY-01LF	83948AYI-01LFT	8430EY-01	8432CYI-51LFT
8343AY-01LFT	83948AYI-01T	8430EY-01LF	8432DY-101
8343AY-01T	83948AYI-147	8430EY-01LFT	8432DY-101LF
8343AYI-01	83948AYI-147LF	8430EY-01T	8432DY-101LFT
8343AYI-01LF	83948AYI-147LFT	8430EY-11LF	8432DY-101T
8343AYI-01LFT	83948AYI-147T	8430EY-11LFT	8432DYI-101LF
8343AYI-01T	83948AYILF	84314AY-02LF	8432DYI-101LFT
83918AYI	83948AYILFT	84314AY-02LFT	84330BY-03LF
83918AYILF	83948AYIT	84314AYLF	84330BY-03LFT
83918AYILFT	84021AY	84314AYLFT	84330BYLF



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Part Number	Part Number	Part Number	Part Number
84330BYLF-IB0	8521BYLNT	8624BYIT	8732AY-01T
84330BYLFT	85310AYI-01	8624BYLF	8732AYI-01
84330BYLFT-IB0	85310AYI-01LF	8624BYLFT	8732AYI-01T
84330BYLN	85310AYI-01LFT	8624BYT	8733BY-01LF
84330BYLNT	85310AYI-01LN	8634BY-01	8733BY-01LFT
84330BYLNT-IB0	85310AYI-01LNT	8634BY-01LF	8735AY-01
84330CYILF	85310AYI-01LNT-IB0	8634BY-01LFT	8735AY-01LF
84330CYILFT	85310AYI-01T	8634BY-01T	8735AY-01LFT
84330CYLN	85310AYI-11	86953BYI	8735AY-01T
84330CYLNT	85310AYI-11LF	86953BYI-147	8735AY-31
843S2807DY	85310AYI-11LFT	86953BYI-147T	8735AY-31LF
843S2807DYLF	85310AYI-11T	86953BYI-20	8735AY-31LFT
843S2807DYLFT	85310AYI-21	86953BYI-20T	8735AY-31T
843S2807DYT	85310AYI-21LN	86953BYIT	8735AYI-01
844008BYI-15LF	85310AYI-21LNT	8705BY	8735AYI-01LF
844008BYI-15LFT	85310AYI-21T	8705BYI	8735AYI-01LFT
8442AY	85310AYI-31	8705BYI-01LF	8735AYI-01T
8442AYI	85310AYI-31T	8705BYI-01LFT	873990AYLF
8442AYILF	853111AY	8705BYILF	873990AYLFT
8442AYILFT	853111AYLF	8705BYILFT	873991AY-147LF
8442AYIT	853111AYLFT	8705BYIT	873991AY-147LFT
8442AYLF	853111AYT	8705BYLF	873991AYLF
8442AYLFT	8531AY-01	8705BYLFT	873991AYLFT
8442AYT	8531AY-01LF	8705BYT	8745BY
8442BYILF	8531AY-01LFT	8705BYT-INO	8745BYI
8442BYILFT	8531AY-01T	8725AY-01LF	8745BYILF
8442BYLF	8531AY-01T-IB0	8725AY-01LFT	8745BYILFT
8442BYLFT	853210AYLF	8725AYI-01	8745BYIT
851010AYLF	853210AYLFT	8725AYI-01-TLB	8745BYLF
851010AYLFT	8532AY-01LF	8725AYI-01-TLBS	8745BYLFT
85210AY-21	8532AY-01LFT	8725AYI-01LF	8745BYT
85210AY-21T	853S031BYILF	8725AYI-01LF-TLBS	8752CY
85210AY-31	853S031BYILFT	8725AYI-01LFT	8752CYI
85210AY-31LF	853S111AYILF	8725AYI-01T	8752CYILF
85210AY-31LFT	853S111AYILFT	8725AYI-01T-TLB	8752CYILFT
85210AY-31T	854110AYILF	8725AYI-01T-TLBS	8752CYIT
8521AYI-03	854110AYILFT	8725BY-01	8752CYLF
8521AYI-03LN	854210CYLF	8725BY-01LF	8752CYLFT
8521AYI-03LNT	854210CYLFT	8725BY-01LFT	8752CYT
8521AYI-03LNT-IB0	8602BYLF	8725BY-01T	8752DYI
8521AYI-03T	8602BYLFT	87322BYILF	8752DYIT
8521AYI-03T-IB0	8624BY	87322BYILFT	87608AYI
8521BYLF	8624BYI	8732AY-01	87608AYILF
8521BYLFT	8624BYILF	8732AY-01LF	87608AYILFT
8521BYLN	8624BYILFT	8732AY-01LFT	87608AYILFT-IB0



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Part Number	Part Number	Part Number	Part Number
87608AYIT	87973DY-SC9LF	MC68160AFB	MPC9331FAR2
87931AYI-147	87973DY-SC9LFT	MC68160AFBR2	MPC9350AC
87931AYI-147LF	87973DYI	MC68160BAE	MPC9350ACR2
87931AYI-147LFT	87973DYI-147	MC68160BAER2	MPC9350FA
87931AYI-147T	87973DYI-147LF	MC68160BFB	MPC9350FA/W
87931BYI	87973DYI-147LFT	MC68160BFBR2	MPC9350FAR2
87931BYILF	87973DYI-147T	MPC9109AC	MPC9350FAR2/W
87931BYILFT	87973DYILF	MPC9109ACR2	MPC9351AC
87931BYIT	87973DYILFT	MPC9109FA	MPC9351ACR2
87946AYI	87973DYIT	MPC9109FAR2	MPC9351FA
87946AYI-01	87974BYI	MPC9229AC	MPC9351FAR2
87946AYI-01LF	87974BYILN	MPC9229ACR2	MPC9352AC
87946AYI-01LFT	87974BYILNT	MPC9229FA	MPC9352ACR2
87946AYI-01T	87974BYIT	MPC9229FAR2	MPC9352FA
87946AYI-147	87974CYI	MPC9230AC	MPC9352FAR2
87946AYI-147LF	87974CYILF	MPC9230ACR2	MPC93H51AC
87946AYI-147LFT	87974CYILFT	MPC9230FA	MPC93H51ACR2
87946AYI-147T	87974CYIT	MPC9230FAR2	MPC93H51FA
87946AYILF	87993AYI	MPC9239AC	MPC93H51FAR2
87946AYILFT	87993AYILF	MPC9239ACR2	MPC93H52AC
87946AYIT	87993AYILFT	MPC9239FA	MPC93H52ACR2
87949AYI	87993AYIT	MPC9239FAR2	MPC93H52FA
87949AYILF	MC100ES6111AC	MPC92429AC	MPC93H52FAR2
87949AYILFT	MC100ES6111AC/W	MPC92429ACR2	MPC93R51AC
87949AYIT	MC100ES6111ACR2	MPC92429FA	MPC93R51ACR2
87950BYI	MC100ES6111FA	MPC92429FAR2	MPC93R51FA
87950BYILF	MC100ES6111FAR2	MPC92439AC	MPC93R51FAR2
87950BYILFT	MC100ES6210AC	MPC92439ACR2	MPC93R52AC
87950BYIT	MC100ES6210ACR2	MPC92439FA	MPC93R52ACR2
87951AYI	MC100ES6210FA	MPC92439FAR2	MPC93R52FA
87951AYI-147LF	MC100ES6210FAR2	MPC92469AC	MPC93R52FAR2
87951AYI-147LFT	MC100ES6226AC	MPC92469ACR2	MPC940LAC
87951AYILF	MC100ES6226ACR2	MPC92469FA	MPC940LACR2
87951AYILFT	MC100ES6226FA	MPC92469FAR2	MPC940LFA
87951AYIT	MC100ES6226FAR2	MPC9315AC	MPC940LFA/W
87952AYI-147	MC100ES6254AC	MPC9315ACR2	MPC940LFAR2
87952AYI-147LF	MC100ES6254ACR2	MPC9315FA	MPC940LFAR2/W
87952AYI-147LFT	MC100ES6254FA	MPC9315FAR2	MPC942CAC
87952AYI-147T	MC100ES6254FAR2	MPC9330AC	MPC942CACR2
87972DYI	MC12429FA	MPC9330ACR2	MPC942CFA
87972DYI-147LF	MC12429FAR2	MPC9330FA	MPC942CFAR2
87972DYI-147LFT	MC12430FA	MPC9330FAR2	MPC942PAC
87972DYILF	MC12430FAR2	MPC9331AC	MPC942PACR2
87972DYILFT	MC68160AEB	MPC9331ACR2	MPC942PFA
87972DYIT	MC68160AEBR2	MPC9331FA	MPC942PFAR2



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Part Number	Part Number	Part Number	Part Number
MPC9446AC	MPC9608ACR2	MPC9658ACR2	MPC97H74AE
MPC9446ACR2	MPC9608FA	MPC9658FA	MPC97H74AER2
MPC9446FA	MPC9608FAR2	MPC9658FAR2	MPC9824AC
MPC9446FAR2	MPC961CAC	MPC9772AE	MPC9824ACR2
MPC9447AC	MPC961CACR2	MPC9772AER2	MPC9824FA
MPC9447ACR2	MPC961CFA	MPC9772FA	MPC9824FAR2
MPC9447FA	MPC961CFAR2	MPC9772FA/W	MPC9992AC
MPC9447FAR2	MPC961PAC	MPC9772FAR2	MPC9992ACR2
MPC9448AC	MPC961PACR2	MPC9772FAR2/W	MPC9992FA
MPC9448ACR2	MPC961PFA	MPC9773AE	MPC9992FAR2
MPC9448FA	MPC961PFAR2	MPC9773AER2	MPC9993AC
MPC9448FAR2	MPC9653AAC	MPC9773FA	MPC9993ACR2
MPC9449AE	MPC9653AAC/W	MPC9773FAR2	MPC9993FA
MPC9449AER2	MPC9653AACR2	MPC9774AE	MPC9993FAR2
MPC9449FA	MPC9653AACR2/W	MPC9774AER2	MPC99J93AC
MPC9449FAR2	MPC9653AFA	MPC9774FA	MPC99J93ACR2
MPC9456AC	MPC9653AFA/A	MPC9774FAR2	MPC99J93FA
MPC9456ACR2	MPC9653AFA/M	MPC97H73AE	MPC99J93FAR2
MPC9456FA	MPC9653AFAR2	MPC97H73AER2	SC97H73XFA
MPC9456FAR2	MPC9653AFAR2/M	MPC97H73FA	SC97H73XFAR2
MPC9608AC	MPC9658AC	MPC97H73FAR2	