12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20141204001A
Assembly Site move from Amkor K1 to TI Philippines
for Select Devices
Change Notification / Sample Request

Dear Customer:

The purpose of this version A is to retract devices from this change notification. The retraction is for select devices that were inadvertently included and are not affected by this change. We apologize for any inconvenience this may have caused.

Amkor K1 (Korea) is closing its facility by 2015. This product change announcement is to support transfer of products in the TQFP package to alternate sites. The details of this change are on the following pages.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require samples or additional data to support your evaluation, please request within 30 days to ensure you can complete your evaluation and product transfer to the new site can be completed prior to the HIJI site closure.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

PCN# 20141204001A
Attachment: 1

Products Affected:

According to our records, there are the affected device(s) that you have purchased within the past twenty-four (24) months. Technical details of this Product Change follow on the next page(s).

PCN Number:	20141204001A	PCN Date:	05/26/2015
Title:	Assembly Site move from Amkor K1 to TI Philippines for Select Devices		
Customer Contact:	PCN Manager	Phone: +1(214)480-6037	Dept: Quality Services

Change Type:

☒	Assembly Site	☐	Design	☐	Wafer Bump Site
☐	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☒	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☒	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

Revision A is to remove select devices in the Product Affected Section (with ~~strikethrough~~) and highlighted in yellow. These devices were inadvertently added and not affected by this change.

Assembly Site move from Amkor K1 to TI Philippines for Select Devices. Material differences are as follows:

	Amkor K1	TI Philippines
Mount Compound	101361223	4208458
Mold Compound	101319571	4211649
Lead Finish	Matte Sn	NiPdAu

Reason for Change:

Closure of the Amkor K1 assembly facility. Continuity of supply.

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None.

Changes to product identification resulting from this PCN:

Sample Product Shipping Label (not actual product label)

Group 1: Assembly Site

Amkor K1	Assembly Site Origin (22L)	ASO: AMN
TI Philippines	Assembly Site Origin (22L)	ASO: PHI

ASSEMBLY SITE CODES: AMN =7, PHI = W

Product Affected Group:

~~DP83846AVHG/NOPB~~	DS90C387VJDX/NOPB	DS90CR483VJDX/NOPB	LM9740CCVS/NOPB
DP83849CVS/NOPB	DS90CF388AVJD/NOPB	DS90CR484AVJD/NOPB	LM9779CCVS/NOPB
DP83849CVSX/NOPB	DS90CF388VJD/E7001015	DS90CR484AVJDX/NOPB	LM9780CCVS/J7000520
DP83849IDVS/NOPB	DS90CF388VJD/NOPB	DS90CR484VJD/NOPB	LM9780CCVS/NOPB
DP83849IDVSX/NOPB	DS90CF388VJD/S7000558	DS90CR484VJD/S7002055	LM9833CCVJD/NOPB
DP83849IFVS/NOPB	DS90CF388VJDX/J7000877	DS90CR484VJDX/NOPB	LM9833CCVS-I/NOPB
DP83849IFVSX/NOPB	DS90CF388VJDX/NOPB	DS90CR485VS/NOPB	LM98519VHB/NOPB
DP83849IVS/NOPB	DS90CR481VJD/NOPB	DS90CR486VS/NOPB	LM98620VHB/NOPB
DP83849IVSX/NOPB	DS90CR482VS/NOPB	~~DS92LV16TVHG/NOPB~~	LMH6583YA/NOPB
DS90C387AVJD/NOPB	DS90CR482VSX/NOPB	~~DS92LV16TVHGX/NOPB~~	LMH6586VS/NOPB
DS90C387RVJD/NOPB	DS90CR483AVJD/NOPB	~~DS92LV18TVV/NOPB~~	SCANSTA112VS/NOPB
DS90C387RVJDX/NOPB	DS90CR483AVJDX/NOPB	~~DS92LV18TVVX/NOPB~~	SCANSTA112VSX/NOPB
DS90C387VJD/NOPB	DS90CR483VJD/NOPB	LM9700BCVS/NOPB	

Qualification Report

Amkor K1 Closure and L/TQFP transfer to PHI

Product Attributes

	Qual Device 1: DP83849IDVL863	Qual Device 2: DS92LV16TVZWFG	Qual Device 3: DS92LV18TVYGTY	Qual Device 4: LM9830VJD/NOPB
Die Attributes				
Die Revision	A	A	A	B
Wafer Fab Site	MFAB	MFAB	MFAB	TSMC
Wafer Fab Process	CMOS9T.5	CMOS8.5	CMOS8.6	0.50UM-TSMC
Package Attributes				
Assembly Site	PHI	PHI	PHI	PHI
Package Family	TQFP	LQFP	LQFP	TQFP
Package Designator	PFC	PN	PN	NEZ
Package Size (mils)	472.44 X 472.44	472.44 X 472.44	472.44 X 472.44	551.18 X 551.18
Body Thickness (mils)	39.37	55.12	55.12	39.37
Pin Count	80	80	80	100
Lead Frame Material	CU	CU	CU	CU
Lead Finish	NiPdAu	NiPdAu	NiPdAu	NiPdAu
Lead Pitch (mils)	19.68	19.68	19.68	19.68
Mount Compound	4208458	4208458	4208458	4208458
Mold Compound	4211649	4211649	4211649	4211649
Bond Wire Composition	Au	Au	Au	Au
Bond Wire Diameter (mils)	0.96	0.96	0.96	0.96
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0

	Qual Device 5: LM98519VHBNOPB	Qual Device 6: LMH6583YA/NOPB	Qual Device 7: LMH6586VS/NOPB	Qual Device 8: SCANSTA112GWKN
Die Attributes				
Die Revision	A	C	A	B
Wafer Fab Site	MFAB	MFAB	MFAB	MFAB
Wafer Fab Process	CMOS9.5	VIP010	CMOS7	CMOS7
Package Attributes				
Assembly Site	PHI	PHI	PHI	PHI
Package Family	TQFP	HTQFP	TQFP	TQFP
Package Designator	PFC	PAP	PFC	PZT
Package Size (mils)	472.44 X 472.44	393.7 X 393.7	472.44 X 472.44	551.18 X 551.18
Body Thickness (mils)	39.37	39.37	39.37	39.37
Pin Count	80	64	80	100
Lead Frame Material	CU	Cu	CU	CU
Lead Finish	NiPdAu	NiPdAu	NiPdAu	NiPdAu
Lead Pitch (mils)	19.68	19.68	19.68	19.68
Mount Compound	FS849-TI	FS849-TI	FS849-TI	FS849-TI
Mold Compound	EME-G700LS	EME-G700LB	EME-G700LS	EME-G700LS
Bond Wire Composition	Au	Au	Au	Au
Bond Wire Diameter (mils)	0.96	0.96	0.96	0.96
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL3-260CG: DP83849IDVL863, DS92LV16TVZWFG, DS92LV18TVYGTY, LM9830VJD/NOPB, LM98519VHBNOPB, LMH6583YA/NOPB, LMH6586VS/NOPB, SCANSTA112GWKN

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	Test Name / Condition	Duration	Qual Device 1: DP83849IDVL863	Qual Device 2: DS92LV16TVZWFG	Qual Device 3: DS92LV18TVYGTY	Qual Device 4: LM9830VJD/NOPB
AC	Autoclave 121C	96 Hours	3/231/0	-	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-	3/231/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	3/231/0	-	3/231/0	3/231/0
ED	Electrical Characterization, side by side	Per Datasheet Parameters	-	1/30/0	1/30/0	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass
MSL	Moisture Sensitivity, JEDEC	Level 3-260C	3/36/0	-	3/36/0	3/36/0
	Thermal Integrity Sequence	Level 3-260C	-	-	-	-

Type	Test Name / Condition	Duration	Qual Device 5: LM98519VHBNOPB	Qual Device 6: LMH6583YA/NOPB	Qual Device 7: LMH6586VS/NOPB	Qual Device 8: SCANSTA112GWKN
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	-
HTSL	High Temp Storage Bake 150C	1000 Hours	3/231/0	3/231/0	3/231/0	-
ED	Electrical Characterization, side by side	Per Datasheet Parameters	-	-	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass
MSL	Moisture Sensitivity, JEDEC	Level 3-260C	3/36/0	-	3/36/0	-
	Thermal Integrity Sequence	Level 3-260C	-	3/36/0	-	-

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles
Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

Green/Pb-free Status:
Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com