PCN Number:	20160630000	**PCN Date:**	07/05/2016
Title:	Qualification of AMKOR P3 as Additional Assembly and Test Site for Select LSON-CLIP Package Devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	10/05/2016	**Estimated Sample Availability:**	Date provided at sample request

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:

Texas Instruments Incorporated is announcing the qualification of AMKOR P3 as Additional Assembly and Test Site for select devices listed in the "Product Affected" Section. Current assembly sites and Material differences are as follows.

Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly Site City
TI Clark	QAB	PHL	Angeles City, Pampanga
Amkor P3	**AP3**	**PHL**	**Biñan, Laguna**

Material Differences:

	TI Clark	AMKOR P3
Mold compound	4208625	101390791
Mount compound (Controller side)	4220838 (95Pb/5Sn)	101361478 (Epoxy)
Lead finish	NiPdAu	Matte Sn

Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.

Reason for Change:

Continuity of supply.

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

None

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website.

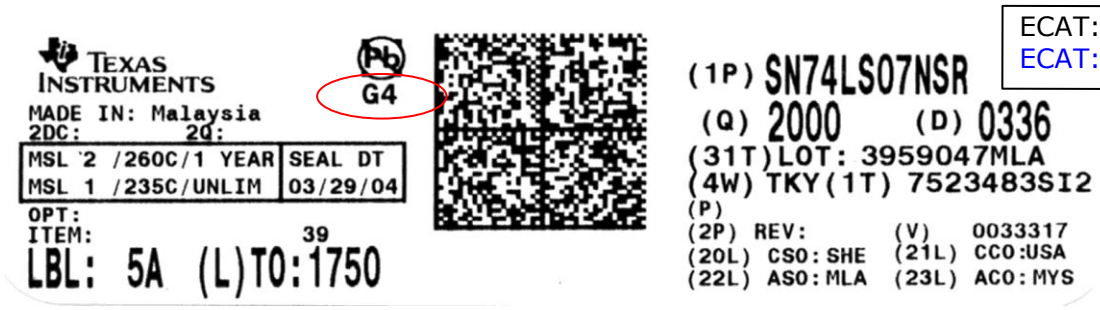
Changes to product identification resulting from this PCN:

Sample product shipping label (not actual product label)

Assembly Site:

TI-CLARK	Assembly Site Origin (22L)	ASO: QAB	ECAT: G4
AMKOR P3	Assembly Site Origin (22L)	ASO: AP3	ECAT: G3

Sample product shipping label to show code location (not actual product label)



ECAT: G4 = NiPdAu
ECAT: G3 = Matte Sn

ASSEMBLY SITE CODES: TI-CLARK = I , AP3 = 3

Product Affected:

HPA01110DQPR	TPS53319DQPR	TPS53355ADQPT	TPS56121DQPT
HPA01111DQPR	TPS53319DQPT	TPS53355DQPR	TPS56221BDQPR
SN1109022DQPR	TPS53353DQPR	TPS53355DQPT	TPS56221DQPR
TPS53318DQPR	TPS53353DQPT	TPS56121BDQPR	TPS56221DQPT
TPS53318DQPT	TPS53355ADQPR	TPS56121DQPR	

Qualification Report

Amkor AP3 Phase 6 HPS DQP Clip QFN Offload from Clark to Amkor

Date: 06/30/2016

Product Attributes

Attributes	Qual Device: TPS53319DQP	Qual Device: TPS53355DQP	Qual Device: TPS56121BDQP
Assembly Site	AP3 (AMKOR P3)	AP3 (AMKOR P3)	AP3 (AMKOR P3)
Package Family	SON	SON	SON
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	CFAB, MIH0 8	CFAB, DMOS5	CFAB, DMOS5
Wafer Fab Process	FET_NCH_LV_GEN2.0, LBC7	FET_NCH_LV_GEN2.0, LBC7	FET_NCH_LV_GEN2.0, LBC7

- QBS: Qual By Similarity
- Qual Device TPS53319DQP, TPS53355DQP, TPS56121BDQP is qualified at LEVEL2-260C
- Device TPS53319DQP, TPS53355DQP, TPS56121BDQP contains multiple dies.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS53319DQP	Qual Device: TPS53355DQP	Qual Device: TPS56121BDQP
ED	Electrical Characterization, side by side	Per Datasheet Parameters	1/30/0	1/30/0	-
FLAM	Flammability (UL 94V-0)	Flammability/Method A	-	-	3/15/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	3/231/0
PD	Physical Dimensions	(per mechanical drawing)	-	-	3/30/0
SD	Solderability	Pb Free Solder	-	-	3/75/0
TC	Temperature Cycle, -55/125C	700 Cycles	3/231/0	1/77/0	3/231/0
XRAY	X-ray	(top side only)	1/5/0	1/5/0	1/5/0

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

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

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