




PCN Number:	20181113001.1A		PCN Date:	Jan 08, 2019													
Title:	Qualification of AMKOR P1 as an additional Assembly & Test site for select devices																
Customer Contact:	PCN Manager		Dept:	Quality Services													
Proposed 1st Ship Date:	Feb 14, 2019		Estimated Sample Availability:	Date provided at sample request													
Change Type:																	
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site												
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material												
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process												
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site												
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials												
		<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process												
PCN Details																	
Description of Change:																	
Revision A is to remove Test site and update the description of change to provide correction on the roughened lead frame finish from Double to Single side roughened. We apologize for any inconvenience this may have caused.																	
Texas Instruments is pleased to announce the qualification of AMKOR P1 as an additional Assembly & Test site for select devices. Assembly differences are as follows:																	
<table border="1"> <thead> <tr> <th>Assembly Site</th> <th>Assembly Site Origin</th> <th>Assembly Country Code</th> <th>Assembly City</th> </tr> </thead> <tbody> <tr> <td>ASE Korea</td> <td>ASF</td> <td>KOR</td> <td>Kaohsiung</td> </tr> <tr> <td>Amkor P1</td> <td>AKR</td> <td>PHL</td> <td>Muntinlupa City</td> </tr> </tbody> </table>						Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly City	ASE Korea	ASF	KOR	Kaohsiung	Amkor P1	AKR	PHL	Muntinlupa City
Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly City														
ASE Korea	ASF	KOR	Kaohsiung														
Amkor P1	AKR	PHL	Muntinlupa City														
Material differences:																	
		ASE Korea		Amkor P1													
Mount compound		101335950		101371420													
Mold Compound		101323397		101376660													
Lead frame finish		NiPdAu		NiPdAu (Double Single side roughened)													
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																	
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	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-Info website . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.														
Changes to product identification resulting from this PCN:																	

Sample Product Shipping Label (not actual product label)

Assembly Site		
ASE Korea	Assembly Site Origin (22L)	ASO: ASF
Amkor P1	Assembly Site Origin (22L)	ASO: AKR

MADE IN: Malaysia
2DC: 2Q:

MSL '2 /260C/1 YEAR	SEAL DT
MSL 1 /235C/UNLIM	03/29/04

OPT:
ITEM: 39
LBL: 5A (L)T0:1750

(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T) LOT: 3959047MLA
(4W) TKY(1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
(20L) CSO: SHE (21L) CCO:USA
(22L) ASO: MLA (23L) ACO: MYS

Product Affected:

DRV8332DKD	HPA01202BDKDR	TAS5614ADKDR	TAS5631BDKDR
DRV8332DKDR	TAS5613ADKD	TAS5630BDKD	
DRV8432DKD	TAS5613ADKDR	TAS5630BDKDR	
DRV8432DKDR	TAS5614ADKD	TAS5631BDKD	

Qualification Report

Approval Date 9-Nov-2018

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: DRV8432DK DR	QBS Device: TAS5424BTDKDR Q1	QBS Device: TAS5424BTDKE Q1
PC	Preconditioning	Level 4-260C	3/77/0	--	--
TC	Temperature Cycle, -65/150C	500 Cycles	3/77/0	--	--
MQ	Manufacturability (Assembly)	(per mfg. site spec.)	PASS	--	--
MSL	Moisture Sensitivity	Level 4-260C	3/12/0	--	--
YLD	FTY and Bin Summary	-	PASS	--	--
PC	Auto Preconditioning	Level 3-245C	--	3/321/0	3/398/0
HTSL	Auto High Temperature Storage Life, 150C	1000 Hours	--	3/135/0	3/135/0
HAST	Auto Biased HAST, 130C/85%RH	96 Hours	--	3/231/0	3/231/0
AC	Auto Autoclave, 121C, 2 atm	96 Hours	--	3/231/0	3/231/0
TC	Auto Temperature Cycle, -65/150C	500 Cycles	--	3/231/0	3/231/0
PTC	Auto Power Temperature Cycle, -40/105C	500 Cycles	--	1/45/0	1/45/0
WBP	Auto Post TC Bond Pull		--	PASS	PASS
MQ	Manufacturability (Auto Assembly)	(per mfg. site spec.)	--	PASS	PASS
HTOL	Auto High Temperature Operating Life, 125C	1000 Hours	--	--	3/231/0
ELFR	Auto Early Life Failure Rate, 150C	24 Hours	--	--	3/800/0
ED	Electrical Distributions	Cpk>1.67, tri-temp	--	--	3/90/0

SD	Auto Solderability	Pb / Pb-Free	--	--	1/30/0
PD	Auto Physical Dimensions	(per device drawing)	--	--	3/30/0
TPI	Thermal Path Integrity	Level 3-245C	--	--	3/36/0

- QBS: Qual by Similarity
- Qual Device DRV8432DKDR is qualified at LEVEL4-260C.
- QBS Device TAS5424BTDKDRQ1 is qualified at LEVEL3-245C.
- QBS Device TAS5424BTDKEQ1 is qualified at LEVEL3-245C.
- 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/1000 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/1000 Hours, and 170C/420 Hours.
- The following are equivalent Temperature 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

THIS INFORMATION RELATING TO QUALITY AND RELIABILITY IS PROVIDED "AS IS." Product information detailed in this report may not accurately reflect TI's current product materials, processes and testing used in the construction of the TI products. Customers are solely responsible to conduct sufficient engineering and additional qualification testing to determine whether a device is suitable for use in their applications. Using TI products outside limits stated in TI's datasheet may void TI's warranty. See TI's Terms of Sale at "<http://www.ti.com/lsds/ti/legal/termsofsale.page>"

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