

PCN Number:	20180914000.1		PCN Date:	Sept 14 2018	
Title:	Subcon Amkor Philippines (AP1) Die Sale Offload to Clark-AT				
Customer Contact:	PCN Manager		Dept:	Quality Services	
Proposed 1st Ship Date:	Dec 14 2018		Estimated Sample Availability:	Date provided at sample request	
Change Type:					
<input 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 type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials
				<input type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
Texas Instruments Incorporated is announcing the qualification of Clark-AT site for devices sold in die format (Packing - Waffle pack, gel-pack, TnR, Film Frame) currently assembled at subcon Amkor Philippines (AP1). AP1 is closing Die Sale line end of Dec 2018					
Reason for Change:					
Subcon Amkor Philippines (AP1) closing Die Sale line end of Dec 2018.					
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):					
None					
Changes to product identification resulting from this PCN:					
The product box label site origin codes will change as described below:					
Current					
Assembly Site	Assy site code (22L)	Assy country code (23L)			
Amkor Philippines P1	AKR	PHL			
New					
Assembly Site	Assy site code (22L)	Assy country code (23L)			
CLARK A/T	QAB	PHL			
Example sample product shipping label (not actual product label):					
Product Affected:					
5962-1222401Q9A	DAC121S101-MDE	LM136-2.5 MDS	LMH6644 MDC		
5962-1222402V9A	DP83848SKGD1	LM137H MD8	LMH6702 MDC		
5962-8670410V9A	DS16F95 MDA	LM137HVK MD8	LMH6715 MDC		

5962-8680603V9A	DS16F95 MDR	LM137KG MD8	LMH6715-MDR
5962-9673802V9B	DS26C32A MD8	LM138KG-MD8	LMP2012 MDE
5962-9950403V9B	DS26LV32-MD8	LM139 MD8	LMP2012 MDP
5962F0254701V9A	DS90C031 MDR	LM139 MDE	LMP2012 MDR
5962F9560401V9A	DS90C032 MDR	LM139 MDR	LP2953 MDS
5962L0620602V9A	DS90C032-MD8	LM140KG-12 MD8	LT1009MKGD1
5962L1620901V9A	DS90LV019 MDC	LM140KG-5 MD8	MPD23726MKGD1V
5962R0050101V9A	INA129SKGD1	LM148 MD8	MPD23756KGD1
5962R0050102V9A	INA271SKGD1	LM158 MD8	MPD23799KGD
5962R0722701V9A	INA333SKGD1	LM158A MDE	MPD23800KGD
5962R0722901V9A	LF147-MD8	LM158A MDR	MPVRUC1525B-D
5962R0722961V9A	LF156 MD8	LM185-1.2-MD8	MPVUC1845A-D
5962R1022101V9A	LF398 MDC	LM185-2.5 MD8	MPVUC1901-D
5962R1222403V9A	LF412 MD8	LM193 MD8	MSP430F2619S64KGD1
5962R1320202V9A	LM101 MDR	LM193 MDE	MSP430F2619SKGD1
5962R8754903V9A	LM101A MD8	LM193 MDR	OMAPL137BHKGD1
5962R8771002V9A	LM1086-ADJ MDC	LM2901-MDA	OPA211SKGD1
5962R8771003V9A	LM111 MD8	LM2940-5.0 MDE	OPA2333SKGD1
5962R8958702V9A	LM111-MDE	LM2941 MDE	OPA2348CKGD4
5962R9166702V9A	LM117H MD8	LM2941-MD8	OPA657TD1
5962R9452602V9A	LM117H MDE	LM2991 MD8	OPA657TD2
5962R9452603V9A	LM117H MDR	LM3046 MDC	OPA820SKGD3
5962R9560403V9A	LM117HVH MDE	LM336-2.5 MDC	OPA857TD1
5962R9673801V9A	LM117HVH MDR	LM393 MDC	OPA857TD2
5962R9673802V9A	LM117HVKG MD8	LM614 MDC	REF5025SKGD1
5962R9679801V9A	LM117KG MD8	LM6172 MDR	SM28VLT32SKGD3
5962R9679802V9A	LM118 MD8	LM6172-MDE	SM320F2812KGD5150A
5962R9950401V9A	LM119 MD8	LM6211 MDC	SM320F28335KGD51
5962R9950402V9A	LM119 MDE	LM723 MD8	SM470R1B1MKGD51
5962R9951703V9A	LM119 MDR	LM741 MD8	SN65HVD1040SKGD3
5962R9951705V9A	LM120KG-12 MD8	LM747 MD8	SN65HVD11SKGDA
ADC128S102 MDP	LM120KG-15 MD8	LMC6001A MDC	SN65HVD233SKGDA
ADC128S102 MDR	LM120KG-5 MD8	LMC6044-MDC	THS4521SKGD1
ADS1243SKGD1	LM124 MD8	LMC6062I MDC	TPS40200SKGD1
ADS1278SKGDA	LM124 MDE	LMC6081-MDA	TPS40210SKGD1
ADS1282SKGDA	LM124 MDR	LMC6462B-MDC	TPS62000SKGD1
ADS6142SKGD1	LM124A-MD8	LMC6482AI MDA	TPS76901SKGD1
ADS8320SKGD1	LM134 MDC	LMC6482M MD8	TPS7A4501MKGD1
DAC0800 MDC	LM136-2.5 MD8	LMH6609 MDC	TPS7H1201SKGD1
DAC121S101 MDP	LM136-2.5 MDE	LMH6624 MDC	UC1525BVRTD1
DAC121S101 MDR	LM136-2.5 MDR	LMH6639 MDC	UC1843MKGD1

Qualification Report

AP1 Non-Automotive Die Sale Transfer to Clark-AT Approve Date 10-Sep-2018

Product Attributes

Attributes	Qual Device: <u>INA271 SKGD1</u>	Qual Device: <u>LM1086-ADJ- MDC</u>	Qual Device: <u>LM136-25-MDE</u>	Qual Device: <u>LM193-MDE</u>	Qual Device: <u>LMC6482AI-MDA</u>
Assembly Site	CLARK AT	CLARK AT	CLARK AT	CLARK AT	CLARK AT
Package Family	Die Sale	Die Sale	Die Sale	Die Sale	Die Sale
Flammability Rating	-	-	-	-	-
Wafer Fab Supplier	DFAB	GFAB	GFAB	GFAB	GFAB 200MM
Wafer Fab Process	LBC-SOI	LB300-SLM	SLM	BPSLM	P2CMOS

- Qual Devices INA271SKGD1, LM1086-ADJ-MDC, LM136-25-MDE, LM193-MDE, LMC6482AI-MDA have no MSL classification.

Qualification Results

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



Type	Test Name / Condition	Duration	Qual Device: <u>INA271 SKGD1</u>	Qual Device: <u>LM1086- ADJ-MDC</u>	Qual Device: <u>LM136- 25-MDE</u>	Qual Device: <u>LM193- MDE</u>	Qual Device: <u>LMC6482AI- MDA</u>
-	Gel Packing	per ATSS	-	-	-	-	-
-	Waffle Packing	per ATSS	Pass	Pass	Pass	Pass	Pass
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass	Pass

- 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

Attributes	Qual Device: LMH6702-MDC	Qual Device: OMAPL137BHKGD1	Qual Device: SM28VLT32SKGD3	Qual Device: SN65HVD1040SKGD3
Assembly Site	CLARK AT	CLARK AT	CLARK AT	CLARK AT
Package Family	Die Sale	Die Sale	Die Sale	Die Sale
Flammability Rating	-	-	-	-
Wafer Fab Supplier	MFAB	TSMC F14	DM0S5	DFAB

- Qual Devices LMH6702-MDC, OMAPL137BHKGD1, SM28VLT32SKGD3, SN0809054GC2YR, SN0903005C1Y, SN65HVD1040SKGD3, TL1431EQY1, TPS71550SYPCT have no MSL Classification.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LMH6702-MDC	Qual Device: OMAPL137BHKGD1	Qual Device: SM28VLT32SKGD3	Qual Device: SN65HVD1040SKGD3
-	Gel Packing	per ATSS	Pass	-	Pass	Pass
-	Waffle Packing	per ATSS	-	Pass	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass

- 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 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

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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