

PCN Number:	20210219000.1	PCN Date:	Feb 23, 2021
Title:	Qualification of TIPI as an additional Assembly and Test site for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	May 23, 2021	Estimated Sample Availability:	Date Provided at Sample request
Change Type:			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
		<input type="checkbox"/>	Wafer Bump Site
		<input type="checkbox"/>	Wafer Bump Material
		<input type="checkbox"/>	Wafer Bump Process
		<input type="checkbox"/>	Wafer Fab Site
		<input type="checkbox"/>	Wafer Fab Materials
		<input type="checkbox"/>	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments Incorporated is announcing the qualification TIPI (TI Philippines Inc.) as Additional Assembly 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
ASATCHN	ASB	CHN	Dongguan
TI Philippines	PHI	PHL	Baguio City


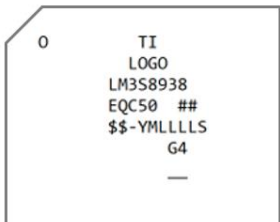
Group 1 Material Differences:

	ASATCHN	TIPI
Wire diam	1.0mil Au	0.8mil Cu
Die attach film	21536001	4211732
Lead Finish	Matte Sn	NiPdAu

Group 2 Material Differences:

	ASATCHN	TIPI
Wire diam	1.0mil Au	0.8mil Cu
Lead Finish	Matte Sn	NiPdAu

Group 1 and 2 Marking Differences: (Sample device marking)

ASATCHN	TIPI
 <p>YMPLLLH = LOT TRACE CODE YM = 2 DIGIT YR/MO CODE PLLL = ASSY LOT H = ASSY PRIMARY SITE CODE \$\$ = WAFER FAB CODE ## = DIE REV (2 DIGIT) S = PRODUCT STATUS D = PLACEHOLDER (PREVIOUSLY TEST SITE) G3 = MUST BE SYMBOLIZED WITH AN UNDERSCORE</p>	 <p>YMPLLLS = LOT TRACE CODE YM = 2 DIGIT YR/MO CODE LLLL = ASSY LOT S = ASSEMBLY SITE CODE \$\$ = WAFER FAB CODE ## = DIE REV (2 DIGIT) G4 = MUST BE SYMBOLIZED WITH AN UNDERSCORE</p>

Reason for Change:

Continuity of supply.
ASATCHN will stop production March 2021

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.
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Changes to product identification resulting from this PCN:

Assembly Site		
ASATCHN	Assembly Site Origin (22L)	ASO: ASB
TIPI	Assembly Site Origin (22L)	ASO: PHI

Sample product shipping label (not actual product label)

Group 1 Product Affected:

LM3S6100-IQC25-A2	LM3S6753-IQC50-A2	LM3S6950-IQC50-A2	LM3S8933-IQC50-A2
LM3S6100-IQC25-A2T	LM3S6911-IQC50-A2	LM3S6950-IQC50-A2T	LM3S8938-EQC50-A2
LM3S6432-IQC50-A2	LM3S6911-IQC50-A2T	LM3S6952-IQC50-A2	LM3S8938-IQC50-A2
LM3S6432-IQC50-A2T	LM3S6915-IQC50-A2	LM3S6965-EQC50-A2	LM3S8938-IQC50-A2T
LM3S6537-IQC50-A2	LM3S6916-IQC50-A2	LM3S6965-IQC50-A2	LM3S8962-EQC50-A2
LM3S6610-IQC25-A2	LM3S6918-EQC50-A2	LM3S6965-IQC50-A2T	LM3S8962-IQC50-A2
LM3S6611-IQC50-A2	LM3S6918-IQC50-A2	LM3S8530-IQC50-A2	LM3S8962-IQC50-A2T
LM3S6618-IQC50-A2	LM3S6918-IQC50-A2T	LM3S8738-IQC50-A2	LM3S8970-IQC50-A2
LM3S6730-IQC50-A2	LM3S6938-IQC50-A2	LM3S8738-IQC50-A2T	LM3S8970-IQC50-A2T
LM3S6730-IQC50-A2T	LM3S6938-IQC50-A2T	LM3S8930-IQC50-A2	LM3S8971-IQC50-A2

Group 2 Product Affected:

LM3S1133-IQC50-A2	LM3S1918-IQC50-A2T	LM3S2965-EQC50-A2	LM3S600-IQN50-C2
LM3S1133-IQC50-A2T	LM3S1937-IQC50-A2	LM3S2965-IQC50-A2	LM3S600-IQN50-C2T
LM3S1138-IQC50-A2	LM3S1958-IQC50-A2	LM3S2965-IQC50-A2T	LM3S601-IQN50-C2
LM3S1138-IQC50-A2T	LM3S1960-IQC50-A2	LM3S300-IQN25-C2	LM3S608-IQN50-C2
LM3S1150-IQC50-A2	LM3S1968-IQC50-A2	LM3S300-IQN25-C2T	LM3S608-IQN50-C2T
LM3S1162-IQC50-A2	LM3S1968-IQC50-A2T	LM3S301-IQN20-C2	LM3S610-IQN50-C2
LM3S1162-IQC50-A2T	LM3S2016-IQC50-A2	LM3S308-IQN25-C2	LM3S611-EQN50-C2T
LM3S1165-IQC50-A2	LM3S2110-EQC25-A2	LM3S310-IQN25-C2	LM3S611-IQN50-C2
LM3S1165-IQC50-A2T	LM3S2110-IQC25-A2	LM3S315-IQN25-C2	LM3S611-IQN50-C2T
LM3S1332-IQC50-A2	LM3S2139-IQC25-A2	LM3S316-IQN25-C2	LM3S612-IQN50-C2
LM3S1439-IQC50-A2	LM3S2139-IQC25-A2T	LM3S317-IQN25-C2	LM3S613-IQN50-C2
LM3S1512-IQC25-A2	LM3S2276-IQR50-A0	LM3S328-EQN25-C2	LM3S615-IQN50-C2
LM3S1538-IQC50-A2	LM3S2412-IQC25-A2	LM3S328-EQN25-C2T	LM3S615-IQN50-C2T
LM3S1601-IQC50-A2	LM3S2601-IQC50-A2	LM3S328-IQN25-C2	LM3S617-IQN50-C2
LM3S1601-IQC50-A2T	LM3S2608-IQC50-A2	LM3S3634-IQR50-A0	LM3S617-IQN50-C2T
LM3S1607-IQR50-A0	LM3S2608-IQC50-A2T	LM3S3651-IQR50-A0	LM3S618-IQN50-C2
LM3S1607-IQR50-A0T	LM3S2616-IQR50-A0	LM3S3739-IQC50-A0	LM3S618-IQN50-C2T
LM3S1608-IQC50-A2	LM3S2616-IQR50-A0T	LM3S3739-IQC50-A0T	LM3S800-IQN50-C2
LM3S1608-IQC50-A2T	LM3S2620-IQC25-A2	LM3S3748-IQC50-A0	LM3S800-IQN50-C2T
LM3S1625-IQR50-A0	LM3S2651-IQC50-A2	LM3S3748-IQC50-A0T	LM3S801-IQN50-C2
LM3S1626-IQR50-A0	LM3S2651-IQC50-A2T	LM3S3749-IQC50-A0	LM3S808-IQN50-C2
LM3S1626-IQR50-A0T	LM3S2671-IQR50-A0	LM3S3749-IQC50-A0T	LM3S808-IQN50-C2T
LM3S1627-IQR50-A0	LM3S2671-IQR50-A0T	LM3S5632-IQR50-A0	LM3S811-IQN50-C2
LM3S1635-IQC50-A2	LM3S2678-IQR50-A0	LM3S5632-IQR50-A0T	LM3S811-IQN50-C2T
LM3S1637-IQC50-A2	LM3S2678-IQR50-A0T	LM3S5732-IQR50-A0	LM3S812-IQN50-C2
LM3S1751-IQC50-A2	LM3S2739-IQC50-A2	LM3S5732-IQR50-A0T	LM3S815-IQN50-C2
LM3S1776-IQR50-A0	LM3S2776-IQR50-A0	LM3S5739-IQC50-A0	LM3S815-IQN50-C2T
LM3S1911-IQC50-A2	LM3S2911-IQC50-A2	LM3S5747-IQC50-A0	LM3S817-IQN50-C2
LM3S1911-IQC50-A2T	LM3S2918-IQC50-A2	LM3S5747-IQC50-A0T	LM3S817-IQN50-C2T
LM3S1918-EQC50-A2	LM3S2948-EQC50-A2	LM3S5749-IQC50-A0	LM3S818-IQN50-C2
LM3S1918-EQC50-A2T	LM3S2948-IQC50-A2	LM3S5749-IQC50-A0T	LM3S828-IQN50-C2
LM3S1918-IQC50-A2	LM3S2950-IQC50-A2	LM3S600-EQN50-C2T	LM3SA000-IQC50-A2T

Qualification Report

Approve Date 05-Feb-2021

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>LM3S328-EQN25-C2</u>	Qual Device: <u>LM3S5632-IQR50-A0</u>	Qual Device: <u>LM3S8938-EQC50-A2</u>
MQ	Manufacturability of assembly	Per TI internal requirements	Pass	Pass	Pass
TC	Temperature Cycling, -65C/150C	-65C/150C	-	-	1/77/0

- QBS: Qual By Similarity
- Qual Device LM3Sx family of devices are qualified at LEVEL3-260C
- Preconditioning was performed for Temperature Cycle

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

Qualification Report

Approve Date 21-Dec-2017

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>PCI2250PGF</u>	Qual Device: <u>TL16CP554APM</u>	Qual Device: <u>TMS320F28062PZT</u>	Qual Device: <u>TMS320VC5509APGE</u>
AC	Autoclave, 121C	96 Hours	3/231/0	3/231/0	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 150C	500 Hours	3/231/0	3/231/0	3/231/0	3/231/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass
MSL	Moisture Sensitivity	Level 3-260C	3/36/0	3/36/0	3/36/0	3/36/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0
VM	Post Autoclave Visual Quality Reliability Inspection	--	3/6/0	3/6/0	-	-
VM	Post Temp. Cycle Visual Quality Reliability Inspection	--	3/6/0	3/6/0	-	-
YLD	FTY and Bin Summary	--	Pass	Pass	Pass	Pass

- QBS: Qual By Similarity

- Qual Devices qualified at LEVEL3-260C: PCI2250PGF, TMS320F28062PZT, TL16CP554APM

- Qual Device TMS320VC5509APGE is qualified at LEVEL4-260C

- 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 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

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