

PCN Number:	20201022000.1		PCN Date:	Nov. 3, 2020												
Title:	Qualification of TIPI as an additional Assembly site for select devices															
Customer Contact:	PCN Manager	Dept:	Quality Services													
Proposed 1st Ship Date:	Feb. 3, 2021	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"/>	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.																
<table border="1"> <thead> <tr> <th>Assembly Site</th> <th>Assembly Site Origin</th> <th>Assembly Country Code</th> <th>Assembly Site City</th> </tr> </thead> <tbody> <tr> <td>TIEMA</td> <td>CU6</td> <td>MYS</td> <td>Melaka</td> </tr> <tr> <td>TI Philippines</td> <td>PHI</td> <td>PHL</td> <td>Baguio City</td> </tr> </tbody> </table>					Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly Site City	TIEMA	CU6	MYS	Melaka	TI Philippines	PHI	PHL	Baguio City
Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly Site City													
TIEMA	CU6	MYS	Melaka													
TI Philippines	PHI	PHL	Baguio City													
Material Differences:																
	TIEMA	TIPI														
Mount compound	8075531	8095733														
Mold compound	8097131	4222198														
Wire Type	Au	Cu														
Lead Finish	Matte Sn	NiPdAu														
Marking Differences:																
TIEMA		TI Philippines														
<p>TOPSIDE SYMBOL</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> A63A ○ </div> <p>○ = PIN 1 INDICATOR</p> <p>BACKSIDE SYMBOL</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> OYML </div> <p>YM = YEAR MONTH DATE CODE L = LAST DIGIT LOT CODE 0 = ORIENTATION DOT</p>		<p>TOPSIDE SYMBOL</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 10px; height: 20px; background-color: gray; margin-right: 5px;"></div> <div style="text-align: center;"> * * * * A63A * * * * </div> </div> </div> <p>■ = PIN 1 STRIPE (MARKED) * * * * = BINARY DATECODE</p>														
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.
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Changes to product identification resulting from this PCN:

Assembly Site		
TIEMA	Assembly Site Origin (22L)	ASO: CU6
TIPI	Assembly Site Origin (22L)	ASO: PHI

Sample product shipping label (not actual product label)

Product Affected:

LM321MF/NOPB	LP2980AIM5-5.0/NOPB	LP2985AIM5-3.3/NOPB	LP5907MFX-1.8/NOPB
LM321MFX/NOPB	LP2980AIM5X-3.0/NOPB	LP2985AIM5-5.0/NOPB	LP5907MFX-2.5/NOPB
LMC7101AIM5/NOPB	LP2980AIM5X-3.3/NOPB	LP2985AIM5X-3.3/NOPB	LP5907MFX-2.8/NOPB
LMC7101AIM5X/NOPB	LP2980AIM5X-5.0/NOPB	LP2985AIM5X-5.0/NOPB	LP5907MFX-2.85/NOPB
LMC7101BIM5/NOPB	LP2980IM5-3.0/NOPB	LP2985IM5-3.3/NOPB	LP5907MFX-2.9/NOPB
LMC7101BIM5X/NOPB	LP2980IM5-3.3/NOPB	LP2985IM5-5.0/NOPB	LP5907MFX-3.0/NOPB
LMC7101BIM5X/S7002311	LP2980IM5-5.0/NOPB	LP2985IM5X-3.3/NOPB	LP5907MFX-3.1/NOPB
LP2980AIM5-3.0/NOPB	LP2980IM5X-3.0/NOPB	LP2985IM5X-5.0/NOPB	LP5907MFX-3.2/NOPB
LP2980AIM5-3.3/NOPB	LP2980IM5X-3.3/NOPB	LP5907MFX-1.2/NOPB	LP5907MFX-3.3/NOPB
LP2980AIM5-3.3/S7002302	LP2980IM5X-5.0/NOPB	LP5907MFX-1.5/NOPB	LP5907MFX-4.5/NOPB

Qualification Report

Approve Date 22-Sep-2020

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>LM321MFX/NO</u> <u>PB</u>	Qual Device: <u>LP2985AIM550</u> <u>NO</u>	Qual Device: <u>LP5907MF</u> <u>X-</u> <u>4.5/NOPB</u>	QBS Package Reference: <u>TLV1805QDBVR</u> <u>Q1</u>	QBS Package Reference: <u>TPS2051CDB</u> <u>VR</u>	QBS Package Reference: <u>TPS76933DB</u> <u>VR</u>
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0	3/231/0	-	-
ED	Electrical Characterization, side by side	(per datasheet limits)	Pass	Pass	Pass	Pass	-	-
HAS	Biased HAST,	192 Hours	-	-	-	3/231/0	-	-

Type	Test Name / Condition	Duration	Qual Device: <u>LM321MFX/NO</u> <u>PB</u>	Qual Device: <u>LP2985AIM550</u> <u>NO</u>	Qual Device: <u>LP5907MF</u> <u>X-</u> <u>4.5/NOPB</u>	QBS Package Reference: <u>TLV1805QDBVR</u> <u>Q1</u>	QBS Package Reference: <u>TPS2051CDB</u> <u>VR</u>	QBS Package Reference: <u>TPS76933DB</u> <u>VR</u>
T	130C/85%RH	(for information)						
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	3/231/0	-	-
HTSL	High Temp Storage Bake 150C	1000 Hours	-	3/231/0	-	-	-	-
HTSL	High Temp Storage Bake 175C	1000 Hours	-	-	-	3/231/0	-	-
SD	Solderability	Pb Free	-	-	-	1/15/0	3/66/0	3/66/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
WBP	Bond Pull	Wires	3/228/0	3/228/0	3/228/0	3/228/0	3/228/0	3/228/0
WBS	Ball Bond Shear	Wires	3/228/0	3/228/0	3/228/0	3/228/0	3/228/0	3/228/0

- QBS: Qual By Similarity

- Qual Devices LM321MFX/NOPB, LP5907MFX-4.5/NOPB, LP2985AIM550NO are qualified at LEVEL1-260CG

- 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

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