

<b>PCN Number:</b>	20200629001.1		<b>PCN Date:</b>	Jul 2, 2020																
<b>Title:</b>	Qualification of ASES as an additional assembly site for a select set of devices in the PW Package																			
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services																	
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Oct 2, 2020	<b>Estimated Sample Availability:</b>	Date provided at sample request																	
<b>Change Type:</b>																				
<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 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															
<b>PCN Details</b>																				
<b>Description of Change:</b>																				
<p>Texas Instruments is pleased to announce the qualification of TI Malaysia as an additional assembly site for the list of devices in the PW package shown below in the product affected section. Current assembly sites and differences are as follows:</p>																				
<table border="1"> <thead> <tr> <th></th> <th><b>ASESH</b></th> <th><b>TI Malaysia</b></th> </tr> </thead> <tbody> <tr> <td>Mount Compound</td> <td>SID#EY1000063</td> <td>4147858</td> </tr> <tr> <td>Mold Compound</td> <td>SID#EN2000507</td> <td>4211471</td> </tr> <tr> <td>Lead Finish</td> <td>Matte Sn</td> <td>NiPdAu</td> </tr> <tr> <td>ECAT</td> <td>G3</td> <td>G4</td> </tr> </tbody> </table>							<b>ASESH</b>	<b>TI Malaysia</b>	Mount Compound	SID#EY1000063	4147858	Mold Compound	SID#EN2000507	4211471	Lead Finish	Matte Sn	NiPdAu	ECAT	G3	G4
	<b>ASESH</b>	<b>TI Malaysia</b>																		
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Mold Compound	SID#EN2000507	4211471																		
Lead Finish	Matte Sn	NiPdAu																		
ECAT	G3	G4																		
<p>Upon expiry of this PCN TI will combine lead free solutions in a single <b><u>standard part number</u></b>, for the devices in groups 1 &amp; 2. For example; <b><u>LMV358AIPWR</u></b> – can ship with both Matte Sn and NiPdAu/Ag.</p>																				
<p>Example:</p> <ul style="list-style-type: none"> <li>– Customer order for 7500 units of LMV358AIPWR with 2500 units SPQ (Standard Pack Quantity per Reel).</li> <li>– TI can satisfy the above order in one of the following ways. <ul style="list-style-type: none"> <li>I. 3 Reels of NiPdAu finish.</li> <li>II. 3 Reels of Matte Sn finish</li> <li>III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish.</li> <li>IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish.</li> </ul> </li> </ul>																				
<b>Reason for Change:</b>																				
Continuity of Supply																				
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>																				
None																				
<b>Anticipated impact on Material Declaration</b>																				
<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 at the site link below <a href="http://www.ti.com/quality/docs/materialcontentsearch.tsp">http://www.ti.com/quality/docs/materialcontentsearch.tsp</a>																	

**Changes to product identification resulting from this PCN:**

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
ASESH	ASH	Shanghai	CHN
<b>TIM Malaysia</b>	<b>MLA</b>	<b>Kuala Lumpur</b>	<b>MYS</b>

Sample product shipping label (not actual product label)

**TEXAS INSTRUMENTS**  
 MADE IN: Malaysia  
 2DC: 20:  
 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  
 G3 = Matte Sn  
 G4 = NiPdAu

**Product Affected:**

LM2904LVIPWR	LMV358AIPWR	TLV9062IPWR	TSV912AIPWR
LM358LVIPWR	TLV9002IPWR		



**TI Information  
Selective Disclosure**

**Qualification Results**

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

Type	Test Name / Condition	Duration	Qual Device: TLV9002IPWR	Qual Device: TLV9062IPWR	Qual Device: LM2904LVIPWR	Qual Device: LM358LVIPWR	Qual Device: LMV358AIPWR	Qual Device: TSV912AIPWR	QBS Product Reference: TLV9002ID	QBS Product/Process Reference: TLV9062ID	QBS Package Reference: TLV9052IPWR
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	-	-	-	Pass	Pass	Pass
HTOL	Life Test, 150C	300 Hours	-	-	-	-	-	-	1/77/0	3/231/0	-
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	-	-	-	3/2400/1 (2)	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-	-	1/77/0	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	-	-	-	-	1/77/1 (1)	3/231/0	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	-	-	-	1/77/0	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	-	-	-	-	1/77/0	3/231/0	2/154/0
HBM	ESD - HBM	2000 V	-	-	-	-	-	-	1/3/2000	-	-
HBM	ESD - HBM	4000 V	-	-	-	-	-	-	-	2/6/2000	1/3/2000
CDM	ESD - CDM	1500 V	-	-	-	-	-	-	1/3/2000	3/9/2000	1/3/2000
LU	Latch-up	Per JESD78	-	-	-	-	-	-	1/6/2000	3/18/2000	1/6/2000
MSL	Moisture Sensitivity, L2	168/85C / 60% RH	-	-	-	-	-	-	-	3/36/0	3/36/0
SD	Pb Free Solderability	Pb Free/Solder	-	-	-	-	-	-	-	3/66/0	-
WBP	Bond Pull	76 Wires, 3 units min	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	-	-	-
WBS	Ball Bond Shear	76 balls, 3 units min	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	-	-	-

- QBS: Qual By Similarity
- Qual Device TLV9062IPWR is qualified at LEVEL2-260C
- Qual Device TLV9002IPWR is qualified at LEVEL2-260C
- 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/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

**Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

Note (1): 1 unit failed due to metal-to-metal contact from bond wire offset. Corrective action implemented - 100% ball on pad inspection.

Note (2): Die EOS, 1 unit – discounted.

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

Location	E-Mail
USA	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
WW PCN Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

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