




PCN Number:	20210401003.2A			PCN Date:	October 03, 2022
Title:	Qualification of Hana as an alternate Assembly site for Select Devices				
Customer Contact:	PCN Manager	Dept:	Quality Services		
Proposed 1st Ship Date:	Oct 2, 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 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:					
<p>Revision A is to announce the <u>retraction</u> of select devices. These devices will continue to be manufactured as prior and will not be subjected to the change described in this notification. Affected devices are identified with a strikethrough and are highlighted in yellow in the Product Affected Section.</p> <p>Texas Instruments is pleased to announce the qualification of Hana as an Additional Assembly site for the list of devices shown below. Current assembly site and Material differences are as follows:</p>					
		TIEM	Hana		
Mount Compound		4223179	SID#400194		
Mold Compound		4213206	SID#450419		
Lead finish/prep		NiPdAu/non RLF	NiPdAu/RLF		
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 at the site link below http://www.ti.com/quality/docs/materialcontentsearch.tsp		
Changes to product identification resulting from this PCN:					
Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City		
TIEM	CU6	MYS	Melaka		
HANA	HNT	THA	Ayutthaya		
Sample product shipping label (not actual product label)					

 TEXAS INSTRUMENTS MADE IN: Malaysia 2DC: 20:	 G4		(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				
<table border="1"> <tr> <td>MSL 2 /260C/1 YEAR</td> <td>SEAL DT</td> </tr> <tr> <td>MSL 1 /235C/UNLIM</td> <td>03/29/04</td> </tr> </table>	MSL 2 /260C/1 YEAR	SEAL DT	MSL 1 /235C/UNLIM	03/29/04	OPT: ITEM: 39 LBL: 5A (L)T0:1750		
MSL 2 /260C/1 YEAR	SEAL DT						
MSL 1 /235C/UNLIM	03/29/04						
Product Affected:							
<table border="1"> <tr> <td style="background-color: yellow;">LMP8640QMKE-T/NOPB</td> <td style="background-color: yellow;">LMP8640QMKX-T/NOPB</td> </tr> </table>				LMP8640QMKE-T/NOPB	LMP8640QMKX-T/NOPB		
LMP8640QMKE-T/NOPB	LMP8640QMKX-T/NOPB						



TI Information
Selective Disclosure

Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)

Approve Date: 23 March 2021

Product Attributes

Attributes	Qual Device: LMP8640QMKX-T/NOPB
Automotive Grade Level	Grade 1
Operating Temp Range	-40°C to +125°C
Product Function	Automotive Catalog Precision High Voltage Current Sense Amplifiers
Die Attributes	
Wafer ID	GLLMP8640AZ020/GHLMP8640AZ020
Wafer Fab Supplier	GFAB6/MAINEFAB
Wafer Diameter (mm)	150/200
Wafer Process Technology	Analog
Wafer Process ID	ABCD150XV1
Die Revision	A/A
Die Size (L,W) (mm)	1.1303 X 1.8669
Die Thickness (mils)	8.5
Die Gate Length (nm)	1500
Backgrind	Mechanical
Die Separation Method	Saw
Package Attributes	
Assembly Site	HNA
Package Type	SOT-23-THN
Package Designator	DDC
Pin Count	6
Package Size (mils)	114.17 X 62.99
Body Thickness (mils)	34.25
Lead Pitch (mils)	37.4
Die Attach Supplier Name	HENKEL
Die Attach Supplier Number	ABLECOAT 8006NS
Die Attach Material ID	SID#400194
Die Attach Method	SCREEN PRINT
Mold Compound Supplier Name	SUMITOMO
Mold Compound Supplier Number	EME-G600
Mold Compound Material ID	SID#450419
Flammability Rating	UL 94 V-0
Wire Bond Material	AU
Wire Bond Diameter (mils)	1.0
Wire Supplier	TANAKA
Wire Material ID	SID#500320
Type of Wire Bond	THERMO-SONIC
Lead Frame Supplier	HDS

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: LMP8640QMKX-T/NOPB
TEST GROUP A – ACCELERATED ENVIRONMENT STRESS TESTS							
PC	A1	J-STD-020 JESD22-A113	3	77	Auto Preconditioning	Level 1 - 260C	3/828/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C	96 Hours	3/231/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave, 121C	96 Hours	3/231/0
TC	A4	JEDEC JESD22-A104 & Appendix 3	3	77	Temperature Cycle, Grade 1, -65/150C	500 Cycles	3/231/0
TC- WBP	A4	MIL-STD883 Method 2011	1	60	Auto Post TC Bond Pull	Wires	3/90/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life, 170C	420 Hours	3/135/0
TEST GROUP B – ACCELERATED LIFETIME SIMULATION TESTS							
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, Grade 1, 125C	1000 Hours	3/231/0
ELFR	B2	AEC Q100-008	3	77	Early Failure Rate, 125C	48 Hours	N/A
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, Operational Life	-	N/A
TEST GROUP C – PACKAGE ASSEMBLY INTEGRITY TESTS							
WBS	C1	AEC Q100-001	3	30	Wire Bond Shear (Cpk>1.67)	-	3/90/0
WBP	C2	MIL-STD883 Method 2011	3	30	Wire Bond Pull (Cpk>1.67)	Wires	3/90/0
SD	C3	JEDEC JESD22-B102	3	15	Surface Mount Solderability (Pb)	>95% Lead Coverage, 155C Dry Bake	3/45/0
SD	C3	JEDEC JESD22-B102	3	15	Surface Mount Solderability (Pb-Free)	>95% Lead Coverage, 155C Dry Bake	3/45/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Auto Physical Dimensions	(Cpk>1.67)	3/30/0
SBS	C5	AEC Q100-010 AEC Q003	3	50	Solder Ball Shear	5 balls from a min. of 10 devices (Cpk>1.67)	N/A
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	# of leads to destruction	3/72/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: LMP8640QMKX-T/NOPB
FG	E6	AEC Q100-007	-	-	Fault Grading	AEC Q100-007 unless otherwise specified	N/A
CHAR	E7	AEC Q003	-	-	Characterization	-	N/A
OTHER QUALIFICATION TESTS							
MQ	-	Per Automotive requirements	3	1	Manufacturability (Auto Assembly)	-	3/PASS
YLD	-	Per datasheet specifications	3	All	FTY and Bin Summary	-	3/PASS
MSL	-	-	3	12	Moisture Sensitivity	Level 1 – 260C	3/36/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold : HTOL, ED

Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room : AC/uHAST

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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