PCN Number:	20200929000.2	PCN Date:	Oct. 6, 2020
Title:	Qualification of MIHO8 as additional Wafer Fab Site option and Leadframe finish change for select ABCD05HV devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Apr. 6, 2021	Estimated Sample Availability:	Date provided at sample request.

Change Type:

☐	Assembly Site	☐	Assembly Process	☒	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☒	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process
		☐	Part number change		

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of its MIHO8 as additional fabrication facility and Leadframe finish change for the selected devices listed in the "Product Affected" section.

Wafer Fab change:

Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
MAINEFAB	ABCD05HV	200 mm	MIHO8	ABCD05HV	200 mm

Construction differences are noted below:

Assembly change:

	Current	Proposed
Leadframe finish	NiPdAu (Selective Roughen double side)	NiPdAu (Single Side Roughen)

Qual details are provided in the Qual Data Section.

Reason for Change:

Continuity of Supply

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

☒	No Impact to the Material Declaration	☐	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 website.

Changes to product identification resulting from this PCN:

Current

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
MAINEFAB	CUA	USA	South Portland

New Fab Site

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
MIHO8	**MH8**	**JPN**	**Ibaraki**

Sample product shipping label (not actual product label)

MADE IN: Malaysia
2DC: 2Q:

MSL 2 /260C/1 YEAR	SEAL DT
MSL 1 /235C/UNLIM	03/29/04

OPT:
ITEM: 39
LBL: 5A (L)TO:1750

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

Product Affected:

TPS92661QPHPRQ1

Automotive New Product Qualification Summary

(As per AEC-Q100 and JEDEC Guidelines)

Approve Date 11-August-2020

Qualification Results

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

Type	#	Test Spec	Min Lot Qty	SS/ Lot	Test Name / Condition	Duration	Qual Device: TPS92661QPHPRQ1	QBS Process Reference: LM25117QPMHX/NOPB	QBS Process Reference TCAN1042HVDRQ1
Test Group A – Accelerated Environment Stress Tests									
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	3/231/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	-	3/231/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	30	Post Temp. Cycle Bond Pull	Wires	-	1/30/0	1/30/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	-	N/A	NA
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 150C	1000 Hours	-	1/45/0	1/45/0
Test Group B – Accelerated Lifetime Simulation Tests									
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	3/231/1 (Note 1)	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 150C	24 Hours	-	-	3/2400/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	--	-	N/A	N/A
Test Group C – Package Assembly Integrity Tests									
WBS	C1	AEC Q100-001	1	30	Bond Shear (Cpk>1.67)	Wires	-	1/30/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	-	1/30/0	1/30/0
SD	C3	JEDEC JESD22-B102	1	15	Solderability (>95% Lead Coverage)	Pb & Pb-Free	-	N/A	N/A
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	--	-	N/A	N/A
Test Group D – Die Fabrication Reliability Tests									
EM	D1	JESD61	-	-	Electromigration	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDB	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E – Electrical Verification Tests									
HBM	E2	AEC Q100-002	1	3	ESD - HBM	2000 V	1/3/0	1/3/0	1/3/0
CDM	E3	AEC Q100-011	1	3	ESD - CDM	750 V	1/3/0	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold Test	1/30/0	3/90/0	3/90/0

Qual Device TPS92661QPHPRQ1 is qualified at LEVEL2-260C
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
Green/Pb-free Status:
Qualified Pb-Free(SMT) and Green
Note 1: 1 discounted fail that occurred at 168 hrs has been attributed to EOS most likely caused by handling issues. FA report attached to eQDB.

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

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