

PCN Number: 20200825000.1 **PCN Date:** Aug 26 2020

Title: Qualification of TFME as an additional assembly site for select Devices

Customer Contact: [PCN Manager](#) **Dept:** Quality Services

Proposed 1st Ship Date: Nov 24 2020 **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:

Texas Instruments Incorporated is announcing the qualification of NFME as an alternate Assembly site for devices listed below in the product affected section. Construction differences and current assembly sites are as follows:

	HNA	TFME
Mold Compound	SID#450179	SID# R-27

Reason for Change:

Supply continuity

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
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Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
HNA	HNT	THA	Ayutthaya
TFME	NFM	CHN	Economic Development Zone

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)TO: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

Product Affected:

DRV5055A1QDBZR	DRV5055A2QDBZR	DRV5055A3QDBZR	DRV5055A4QDBZR
DRV5055A1QDBZT	DRV5055A2QDBZT	DRV5055A3QDBZT	DRV5055A4QDBZT



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Selective Disclosure

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

Type	Test Name / Condition	Duration	Qual Device: DRV5055A1QDBZR	Qual Device: DRV5055A2QDBZR	Qual Device: DRV5055A3QDBZR	Qual Device: DRV5055A4QDBZR	QBS Product Reference: DRV5055A3QDBZ	QBS Product Reference: DRV5055A4QDBZ	QBS Process Reference: DRV5013ADEDBZRQ
AC	Autoclave 121C	96 Hours	-	-	-	-	-	-	3/231/0
CDM	ESD - CDM - Q100	1000	-	-	-	-	-	-	1/3/0
CDM	ESD - CDM - Q100	1500 V	-	-	1/3/0	-	1/3/0	-	-
ED	Auto Electrical Distributions	Cpk>1.33 Ppk>1.67 Room, hot, and cold test	-	-	-	-	-	-	1/30/0
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	1/30/0	1/30/0	1/30/0	-	-	-
ELFR	Early Life Failure Rate, 150C	48	-	-	-	-	-	-	3/2400/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-	1/78/0	3/231/0
HBM	ESD - HBM - Q100	2500 V	-	-	-	-	1/3/0	-	1/3/0
HBM	ESD - HBM - Q100	4000 V	-	-	1/3/0	-	-	-	-
HTOL	Life Test, 150C	1000	-	-	-	-	-	-	3/231/0
HTOL	Life Test, 150C	300	-	-	-	-	-	1/77/0	-
HTOL	Life Test, 150C	408	-	-	-	-	-	-	3/231/0
HTSL	High Temp Storage Bake 175C	1000	-	-	-	-	-	-	1/45/0
HTSL	High Temp Storage Bake 175C	500	-	-	-	-	-	1/77/0	1/45/0
LU	Latch-up	(Per JESD78)	-	-	1/6/0	-	1/6/0	-	1/6/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	-	-	1/Pass	-	-	-	-
MQ	Manufacturability (Auto Assembly)	(per automotive requirements)	-	-	-	-	-	-	1/Pass
MSL	Moisture Sensitivity, L2	Elec/25C	-	-	1/12/0	-	-	-	-
SD	Pb Free Surface Mount Solderability	Pb Free/Solder-	-	-	-	-	-	-	1/15/0
TC	Temperature Cycle, -65/150C	2000	-	-	-	-	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	1/77/0	-	-	1/77/0	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	-	-	1/77/0	-
WBP	Bond Pull	0 Hr	-	-	-	-	-	-	1/5/0

Type	Test Name / Condition	Duration	QBS Package Reference: TMUX1119DCK	QBS Package Reference: TPS61322DBZ
AC	Autoclave 121C	168 Hours	3/231/0	-
AC	Autoclave 121C	96 Hours	3/231/0	-
CDM	ESD - CDM	1500 V	-	1/3/0
CDM	ESD - CDM	2000 V	1/3/0	-
ED	Electrical Characterization	Per Datasheet Parameters	-	1/Pass
HAST	Biased HAST, 130C/85%RH	192 Hours	3/231/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-
HBM	ESD - HBM	4000 V	-	1/3/0
HBM	ESD - HBM	6000 V	1/3/0	-
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	600 Hours	3/231/0	-
HTSL	High Temp Storage Bake 170C	630 Hours	-	3/231/0
LU	Latch-up	(Per JESD78)	1/6/0	1/6/0
MQ	Manufacturability	(per mfg. Site specification)	-	3/Pass
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/Pass	-
MSL	Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	-	3/36/0
MSL	Moisture Sensitivity, JEDEC	Level 1-260C	1/12/0	-
TC	Temperature Cycle, -65/150C	1000 Cycles	3/231/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	750 Cycles	-	3/231/0
UHAST	Unbiased HAST 130C/85%RH	192 Hours	-	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	3/231/0
VM	Bond Pad Crater Check	Completed	3/Pass	-
WBP	Bond Pull	Wires	3/228/0	-
WBS	Wire Bond Shear	Wires	3/228/0	-
YLD	FTY and Bin Summary	-	-	3/Pass

- QBS: Qual By Similarity
 - Qual Device DRV5055A2QDBZR is qualified at LEVEL2-260C
 - Qual Device DRV5055A3QDBZR is qualified at LEVEL2-260C
 - Qual Device DRV5055A1QDBZR is qualified at LEVEL2-260C
 - Qual Device DRV5055A4QDBZR 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
- 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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