PCN Number:	20190509001.2	**PCN Date:**	May 13, 2019
Title:	Transfer of select DLM devices from GFAB to FFAB Wafer Fab site		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	Nov 13, 2019	**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:

This change notification is to announce the transfer of select DLM devices from GFAB to the FFAB (FR-BIP-1) Wafer Fab site for the selected devices listed in the "Product Affected" section.

Current Fab Site			New Fab Site		
Current Fab Site	**Process**	**Wafer Diameter**	**New Fab Site**	**Process**	**Wafer Diameter**
GFAB6	DLM	150 mm	FFAB	DLM	200 mm

Qual details are provided in the Qual Data Section.

Reason for Change:

Greenock, Scotland (GFAB) Wafer Fab site closure

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

None

Changes to product identification resulting from this PCN:

Current

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
GFAB6	GF6	GBR	Greenock

New Fab Site

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
FR-BIP-1	**TID**	**DEU**	**Freising**

Sample product shipping label (not actual product label)

Product Affected Group:

LM9061QDRQ1

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

Approved 7-May-2019
Product Attributes

Attributes	Qual Device: LM9061QDRQ1	QBS Device: LM2576HVT-5.0/NOPB
Automotive Grade Level	Grade 1	Grade 1
Operating Temp Range	-40 to +125 C	-40 to +125 C
Product Function	MOSFET Driver	Power Management
Wafer Fab Supplier	FFAB	FFAB
Die Revision	B	F
Assembly Site	MLA	TIEM
Package Type	SOIC	TO-220
Package Designator	D	KC
Ball/Lead Count	8	5

- QBS: Qual By Similarity
- Qual Device LM9061QDRQ1 is qualified at LEVEL3-260C

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: LM9061QDRQ1	QBS Device: LM2576HVT-5.0/NOPB
Test Group A – Accelerated Environment Stress Tests									
	PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 3-260C	All pass	-
	HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-
	AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	3/231/0	-
	TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-
				3	5	Post-TC Bond Pull	TC 500 Cycles	3/15/0	-

	Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: LM9061QDRQ1	QBS Device: LM2576HVT-5.0/NOPB
	PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	N/A	-
	HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	3/231/0	-
	Test Group B – Accelerated Lifetime Simulation Tests								
	HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	1/77/0	3/231/0
	EFR	B2	JEDEC JESD22-A108	3	800	Early Life Failure Rate, 125C	48 Hours	2/1600/0	3/2400/0
	EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	-
	Test Group C – Package Assembly Integrity Tests								
	WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	Wires	1/30/0	-
	WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	Wires	1/30/0	-
	SD	C3	JEDEC JESD22-B102	1	15	Solderability	Pb free, 8 Hours Steam Age	3/45/0	-
	PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	3/30/0	-
	SBS	C5	AEC Q100-010	3	50	Solder Ball Shear (Cpk>1.67)	Solder Balls	N/A	-
	Test Group D – Die Fabrication Reliability Tests								
	EM	D1	JESD61	-	-	Electromigration	-	-	-
	TDDB	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	-
	HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	-	-
	NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	-	-
	SM	D5	-	-	-	Stress Migration	-	-	-
	Test Group E – Electrical Verification Tests								
	HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	2500 V	3/9/0	-
	CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1500 V	3/9/0	-
	LU	E4	AEC Q100-004	1	6	Latch-up	125C	3/18/0	-
	ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	3/90/0	-

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

Green/Pb-free Status:
Qualified Pb-Free (SMT) and Green

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.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN_ww_admin_team@list.ti.com