

PCN Number:	20231115001.1		PCN Date:	November 16, 2023	
Title:	Qualification of RFAB & DMOS6 as additional Fab site options and Assembly Site (MEX) and BOM Options for select devices				
Customer Contact:	Change Management Team		Dept:	Quality Services	
Proposed 1st Ship Date:	Feb 13, 2024		Sample requests accepted until:	Dec 15, 2023*	
*Sample requests received after Dec 15, 2023 will not be supported.					
Change Type:					
<input checked="" type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input checked="" type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input checked="" type="checkbox"/>	Wafer Fab Material
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input checked="" type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
Texas Instruments is pleased to announce the qualification of its RFAB & DMOS6 fabrication facilities as an additional Wafer Fab options in addition to Assembly site (MEX) and BOM options for the devices listed below.					
Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	New Fab Site	Process	Wafer Diameter
DMOS5, CFAB	LBC5	200mm	RFAB, DMOS6	LBC9	300mm
The die was also changed to support the migration to the LBC9 Process technology					
Construction differences are as follows:					
		ASESH	FMX		
Mount Compound		SID#EY1000063	4224423		
Mold Compound		SID#EN2000509	4211880		
Reason for Change:					
Supply Continuity					
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):					
None					
Impact on Environmental Ratings					
Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.					
RoHS	REACH	Green Status	IEC 62474		
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change		
Changes to product identification resulting from this PCN:					

Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
DMOS5	DM5	USA	Dallas
CFAB	CU3	CHN	CHENGDU
RFAB	RFB	USA	Richardson
DMOS6	DM6	USA	Dallas

Die Rev:**Current****New**

Die Rev [2P]	Die Rev [2P]
A	A

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
ASESH	ASH	CHN	Shanghai
TI Mexico	MEX	MEX	Aguascalientes

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

**G4**



(1P) **SN74LS07NSR**
(Q) **2000** (D) **0336**
(31T) LOT: 3959047MLA
(4W) TKY (1T) 7523483SI2
(P)
(2P) REV: (V) **0033317**
(20L) CS0: SHE (21L) CC0:USA
(22L) AS0: MLA (23L) AC0: MYS

Product Affected:

DRV8870DDA	DRV8870DDAR	DRV8870LDDAR	SN8870DDAR
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Qualification Report

Qualification Plan - DRV8870DDAR PCN bond-out spin at RFAB 2nd source | RFAB-> CD-BP -> FMX (TI Mexico)
Approve Date 07-September-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: <u>P2DRV8870DDAR</u>	QBS Reference: <u>TLV62569DBVR</u>	QBS Reference: <u>DRV8251DDAR</u>
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/231/0	3/231/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	1/77/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB Solder;	-	-	-	3/66/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	3/66/0
ESD	E2	ESD CDM	-	1500 Volts	-	3/9/0	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	-	3/9/0	-
ESD	E2	ESD HBM	-	4000 Volts	-	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	3/9/0	1/6/0

Type	#	Test Name	Condition	Duration	Qual Device: <u>P2DRV8870DDAR</u>	QBS Reference: <u>TLV62569DBVR</u>	QBS Reference: <u>DRV8251DDAR</u>
CHAR	E5	Electrical Characterization	Min, Typ, Max Temp	-	1/30/0	3/90/0	3/90/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	3/90/0

- QBS: Qual By Similarity
- Qual Device P2DRV8870DDAR is qualified at MSL3 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/>

TI Qualification ID: R-NPD-2204-019

Qualification Report

DRV8870DDAR PCN bond-out spin at DMOS6 primary source | DMOS6 -> CD-BP -> FMX (TI Mexico)
Approve Date 07-SEPTEMBER-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: <u>P1DRV8870DDAR</u>	QBS Reference: <u>TLV62569DBVR</u>	QBS Reference: <u>DRV8251DDAR</u>
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/231/0	3/231/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	1/77/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB Solder;	-	-	-	3/66/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	3/66/0
ESD	E2	ESD CDM	-	1500 Volts	-	3/9/0	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	-	3/9/0	1/3/0
ESD	E2	ESD HBM	-	4000 Volts	-	3/9/0	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	3/9/0	1/6/0

Type	#	Test Name	Condition	Duration	Qual Device: <u>P1DRV8870DDAR</u>	QBS Reference: <u>TLV62569DBVR</u>	QBS Reference: <u>DRV8251DDAR</u>
CHAR	E5	Electrical Characterization	Min, Typ, Max Temp	-	1/30/0	3/90/0	3/90/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	3/90/0

- QBS: Qual By Similarity
- Qual Device P1DRV8870DDAR is qualified at MSL3 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/>

TI Qualification ID: R-NPD-2204-018

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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