



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20211220001.1**

**Qualification of RFAB as an additional Fab site option for select ABCD6 devices  
Change Notification / Sample Request**

**Date:** December 23, 2021  
**To:** Newark/Farnell PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments requires acknowledgement of receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If samples or additional data are required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date on Page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team ([PCN\\_ww\\_admin\\_team@list.ti.com](mailto:PCN_ww_admin_team@list.ti.com)). For sample requests or sample related questions, contact your local Field Sales Representative.

PCN Team  
SC Business Services

**20211220001.1**

**Attachment: 1**

**Products Affected:**

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

<b>DEVICE</b>	<b>CUSTOMER PART NUMBER</b>
INA240A1PWR	null
INA240A2PWR	null
INA240A3PWR	null
INA240A4PWR	null

Technical details of this Product Change follow on the next page(s).

<b>PCN Number:</b>	20211220001.1	<b>PCN Date:</b>	December 23, 2021
<b>Title:</b>	Qualification of RFAB as an additional Fab site option for select ABCD6 devices		
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Mar 22, 2022	<b>Estimated Sample Availability:</b>	Date provided at sample request.
<b>Change Type:</b>			
<input type="checkbox"/> Assembly Site	<input type="checkbox"/> Assembly Process	<input type="checkbox"/> Assembly Materials	
<input type="checkbox"/> Design	<input type="checkbox"/> Electrical Specification	<input type="checkbox"/> Mechanical Specification	
<input type="checkbox"/> Test Site	<input type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process	
<input type="checkbox"/> Wafer Bump Site	<input type="checkbox"/> Wafer Bump Material	<input type="checkbox"/> Wafer Bump Process	
<input checked="" type="checkbox"/> Wafer Fab Site	<input checked="" type="checkbox"/> Wafer Fab Materials	<input checked="" type="checkbox"/> Wafer Fab Process	
	<input type="checkbox"/> Part number change		

### PCN Details

#### Description of Change:

Texas Instruments is pleased to announce the qualification of its RFAB fabrication facility as an additional Wafer Fab source for the selected devices listed in the "Product Affected" section.

Current Fab Site				Additional Fab Site			
Current Fab Site	Process	Passivation	Wafer Diameter	Additional Fab Site	Process	Passivation	Wafer Diameter
MAINEFAB	ABCD6	SiN	200 mm	RFAB	ABCD6	SiON	300 mm

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

#### Changes to product identification resulting from this PCN:

##### Current:

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

##### New Fab Site:

New Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
RFAB	RFB	USA	Richardson

Sample product shipping label (not actual product label)



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



(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:

INA240A1PW	INA240A2PW	INA240A3PW	INA240A4PW
INA240A1PWR	INA240A2PWR	INA240A3PWR	INA240A4PWR

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

Approved 02-Dec-2021

**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: <u>INA240A1QP</u> <u>WRQ1</u>	Qual Device: <u>INA240A2QP</u> <u>WRQ1</u>	Qual Device: <u>INA240A3QP</u> <u>WRQ1</u>	Qual Device: <u>INA240A4QP</u> <u>WRQ1</u>	QBS Product Reference: <u>INA240A1QP</u> <u>WRQ1</u>	QBS Process Reference: <u>INA240A1E</u> <u>DQ1</u>	QBS Process Reference: <u>INA240A2E</u> <u>DQ1</u>	QBS Process Reference: <u>INA240A3E</u> <u>DQ1</u>
<b>Test Group A – Accelerated Environment Stress Tests</b>														
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	1/77/0	-	-	-	3/231/0	1/77/0	1/77/0	1/77/0
UHA	A3	JEDEC JESD22-a118	3	77	Unbiased HAST 130C/85%RH	96 Hours	1/79/0	-	-	-	3/231/0	1/77/0	1/77/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	1000 Cycles	1/77/0	-	-	-	-	1/77/0	1/77/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	1820 Cycles	-	-	-	-	-	1/77/0	1/77/0	1/77/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: <u>INA240A1QP</u> <u>WRQ1</u>	Qual Device: <u>INA240A2QP</u> <u>WRQ1</u>	Qual Device: <u>INA240A3QP</u> <u>WRQ1</u>	Qual Device: <u>INA240A4QP</u> <u>WRQ1</u>	QBS Product Reference: <u>INA240A1QP</u> <u>WRQ1</u>	QBS Process Reference: <u>INA240A1E</u> <u>DQ1</u>	QBS Process Reference: <u>INA240A2E</u> <u>DQ1</u>	QBS Process Reference: <u>INA240A3E</u> <u>DQ1</u>
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	2000 Cycles	-	-	-	-	-	1/77/0	1/73/0	1/73/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	1/77/0	-	-	-	3/242/1*	-	-	-
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Auto Post TC Bond Pull	30 ball bonds, min. 5 units	1/5/0	-	-	1/5/0	1/5/0	1/5/0	-	-
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A	N/A	N/A	N/A	-	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	1/45/0	-	-	-	-	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	1000 Hours	-	-	-	-	-	1/45/0	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	500 Hours	-	-	-	-	1/45/0	-	-	-

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: INA240A1QP WRQ1	Qual Device: INA240A2QP WRQ1	Qual Device: INA240A3QP WRQ1	Qual Device: INA240A4QP WRQ1	QBS Product Reference: INA240A1QP WRQ1	QBS Process Reference: INA240A1E DQ1	QBS Process Reference: INA240A2E DQ1	QBS Process Reference: INA240A3E DQ1
<b>Test Group B – Accelerated Lifetime Simulation Tests</b>														
HTOL	B1	JEDEC JESD22-A108	3	77	HTOL 150C	1000 Hours	-	-	-	-	-	1/77/0	1/77/0	1/77/0
HTOL	B1	JEDEC JESD22-A108	3	77	L/T 150C	408 Hours	1/77/0	-	-	-	2/222/0	-	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	L/T 150C	500 Hours	-	-	-	-	1/77/0	-	-	-
ELFR	B2	ACE Q100-008	3	800	Early Life Failure Rate 150C	48 Hours	-	-	-	-	-	1/800/0	1/800/0	1/800/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A	N/A	N/A	3/231/0 (oplife) 1/45/0 (data Retention)	-	-	-
<b>Test Group C – Package Assembly Integrity Tests</b>														
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	-	1/30/0	-	-	-	1/30/0	-	-	-
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	-	1/30/0	-	-	-	1/30/0	-	-	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	Pb and Pb free	-	-	-	-	1/15/0 1/15/0	-	-	-

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: INA240A1QP WRQ1	Qual Device: INA240A2QP WRQ1	Qual Device: INA240A3QP WRQ1	Qual Device: INA240A4QP WRQ1	QBS Product Reference: INA240A1QP WRQ1	QBS Process Reference: INA240A1E DQ1	QBS Process Reference: INA240A2E DQ1	QBS Process Reference: INA240A3E DQ1
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	-	-	-	-	3/30/0	-	-	-
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	-	-	-	-	-	-	-	-	-
<b>Test Group D – Die Fabrication Reliability Tests</b>														
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-
TDD	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	Completed Per Process Technology Requirements	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	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	Completed Per Process Technology Requirements	-	-	-	-
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	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 - Q100	2500 V	1/3/0	-	-	-	-	1/3/0	1/3/0	1/3/0
HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	3000 V	-	-	-	-	1/3/0	-	-	-
HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	4000 V	-	-	-	-	-	-	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1000 V	1/3/0	-	-	-	1/3/0	-	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1500 V	-	-	-	-	-	1/3/0	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	LU	1/6/0	-	-	-	1/6/0	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0

- QBS: Qual By Similarity  
- Qual Device INA240A3QPWRQ1 is qualified at LEVEL2-260C  
- Qual Device INA240A4QPWRQ1 is qualified at LEVEL2-260C  
- Qual Device INA240A2QPWRQ1 is qualified at LEVEL2-260C  
- Qual Device INA240A1QPWRQ1 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

\*Mechanical Failure

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	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
WW PCN Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

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