



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20260522001.2
Qualification of RFAB as an additional Fab site
and TI Chengdu as additional Assembly/Test site
options for select devices
Change Notification / Sample Request

Date: May 26, 2026

To: MOUSER 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 60 days of the date of this notice. Lack of acknowledgement of this notice within 60 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within 60 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 change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

TI values customer engagement and feedback related to TI changes. Customers should contact TI if there are questions or concerns regarding a change notification.

Sincerely,

Change Management Team
SC Business Services

20260522001.2
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
INA214CQDCKRQ1	INA214CQDCKRQ1
INA214BQDCKRQ1	INA214BQDCKRQ1
INA211CQDCKRQ1	INA211CQDCKRQ1
INA213CQDCKRQ1	INA213CQDCKRQ1
INA213BQDCKRQ1	INA213BQDCKRQ1
INA210CQDCKRQ1	INA210CQDCKRQ1
INA215CQDCKRQ1	INA215CQDCKRQ1

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

PCN Number:	20260522001.2	PCN Date:	May 26, 2026																				
Title:	Qualification of RFAB as an additional Fab site and TI Chengdu as additional Assembly/Test site options for select devices																						
Customer Contact:	Change Management Team	Dept:	Quality Services																				
Proposed 1st Ship Date:	November 22, 2026	Sample requests accepted until:	July 25, 2026*																				
*Sample requests received after July 25, 2026 will not be supported.																							
Change Type:																							
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design																				
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet																				
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change																				
<input type="checkbox"/>	Mechanical Specification	<input checked="" type="checkbox"/>	Test Site																				
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process																				
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material																				
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process																				
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Wafer Fab Site																				
<input type="checkbox"/>		<input checked="" type="checkbox"/>	Wafer Fab Material																				
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process																				
PCN Details																							
Description of Change:																							
Texas Instruments is pleased to announce the qualification of RFAB as an additional Fab site option, & TI Chengdu as additional Assembly/Test site options for the devices listed below.																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Current Fab Site</th> <th colspan="3">Additional Fab site</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Additional Fab site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">AIZU</td> <td style="text-align: center;">50HPA07</td> <td style="text-align: center;">200mm</td> <td style="text-align: center;">RFAB</td> <td style="text-align: center;">50HPA07</td> <td style="text-align: center;">300mm</td> </tr> </tbody> </table>				Current Fab Site			Additional Fab site			Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter	AIZU	50HPA07	200mm	RFAB	50HPA07	300mm		
Current Fab Site			Additional Fab site																				
Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter																		
AIZU	50HPA07	200mm	RFAB	50HPA07	300mm																		
Construction differences are as follows:																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>HFTF</th> <th>HNA</th> <th>TFME</th> <th>CDAT</th> </tr> </thead> <tbody> <tr> <td>Wire bond diam/type</td> <td style="text-align: center;">1.0mil Au</td> <td style="text-align: center;">1.0mil Au</td> <td style="text-align: center;">1.0mil Au</td> <td style="text-align: center;">0.8mil Cu</td> </tr> <tr> <td>Mount compound</td> <td style="text-align: center;">SID#A-09</td> <td style="text-align: center;">SID#A-09</td> <td style="text-align: center;">SID#A-09</td> <td style="text-align: center;">4226215</td> </tr> <tr> <td>Mold compound</td> <td style="text-align: center;">SID#R-27</td> <td style="text-align: center;">SID#450179</td> <td style="text-align: center;">SID#R-07</td> <td style="text-align: center;">4222198</td> </tr> </tbody> </table>					HFTF	HNA	TFME	CDAT	Wire bond diam/type	1.0mil Au	1.0mil Au	1.0mil Au	0.8mil Cu	Mount compound	SID#A-09	SID#A-09	SID#A-09	4226215	Mold compound	SID#R-27	SID#450179	SID#R-07	4222198
	HFTF	HNA	TFME	CDAT																			
Wire bond diam/type	1.0mil Au	1.0mil Au	1.0mil Au	0.8mil Cu																			
Mount compound	SID#A-09	SID#A-09	SID#A-09	4226215																			
Mold compound	SID#R-27	SID#450179	SID#R-07	4222198																			
Qual details are provided in the Qual Data Section. Test coverage, insertions, conditions will remain consistent with current testing.																							
Reason for Change:																							
Continuity of supply																							
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):																							
Review the SDP for full evaluation of the change based on the customer use case.																							
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	Chip Site Country	Chip Site City																				

	Code (20L)	Code (21L)	
AIZU	CU2	JPN	Aizuwakamatsu-shi
RFAB	RFB	USA	Richardson

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
HFTF	HFT	CHN	Hefei
HNA	HNT	THA	Ayutthaya
TFME	NFM	CHN	Chongchuan
TI Chengdu	CU3	CHN	Chengdu

Sample product shipping label (not actual product label):



Product Affected:

INA210BQDCKRQ1	INA212BQDCKRQ1	INA214BQDCKRQ1
INA210CQDCKRQ1	INA212CQDCKRQ1	INA214CQDCKRQ1
INA211BQDCKRQ1	INA213BQDCKRQ1	INA215BQDCKRQ1
INA211CQDCKRQ1	INA213CQDCKRQ1	INA215CQDCKRQ1

**Automotive Qualification Summary
(As per AEC-Q100 Rev. J and JEDEC Guidelines)**

Approve Date 17-NOVEMBER -2025

Product Attributes

Attr/Units	Qual Device: INA210BQDCKRQ1	QBS Package Reference: TFS3849H300RVRQ1	QBS Package Reference: LMF276300DFRQ1	QBS Package, Package Reference: TXS61010DCKRQ1	QBS Process Reference: ADS115600GSRQ1	QBS Process Reference: AD5796300BTRQ1	QBS Package, Product Reference: INA210BQDCKRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Signal Chain	Power Management	Power Management	Logic	Signal Chain	Signal Chain	Signal Chain
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	AIZU
Assembly Site	CDAT	CDAT	CDAT	CDAT	ASESHAT	TAI	CDAT
Package Group	SOT	SOT	SOT	SOT	VSSOP	TSSOP	SOT
Package Designator	DCK	DBV	DDF	DCK	DGS	DBT	DCK
Pin Count	6	5	8	6	10	38	6

QBS: Qual By Similarity, also known as Generic Data
Qual Device INA210BQDCKRQ1 is qualified at MSL1 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: INA210BQDCKR01	QBS Package Reference: TPS3846PH30DBVRQ1	QBS Package Reference: LM74703QDDFRQ1	QBS Package Reference: TXS0101QDCKRQ1	QBS Process Reference: ADS1115R00GSRQ1	QBS Process Reference: ADS795300BTRQ1	QBS Package, Product Reference: INA210BQDCKRTL
Test Group A - Accelerated Environment Stress Tests														
PC	A1	JEDEC J-STD-020 JE5D02-A113	3	77	Preconditioning	MSL1 260C	-	1800	33640	33640	33640	-	-	1800
HAST	A2	JEDEC JE5D02-A110	3	77	Biased HAST	130C85%RH	96 Hours	-	32310	32310	32310	-	-	-
ACU/HAST	A3	JEDEC JE5D02-A110/JEDEC JE5D02-A118	3	77	Unbiased HAST	130C85%RH	96 Hours	1/770	32310	32310	32310	-	-	1/770
TC	A4	JEDEC JE5D02-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	1/770	32310	32310	32310	-	-	1/770
TC-BP	A4	ML-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	1/50	1/50	-	1/50	-	-	-
HTSL	A6	JEDEC JE5D02-A103	1	45	High Temperature Storage Life	150C	1000 Hours	1/450	31350	1/450	31350	-	-	1/450
Test Group B - Accelerated Lifetime Simulation Tests														
HTOL	B1	JEDEC JE5D02-A108	3	77	Life Test	125C	1000 Hours	1/770	-	-	-	-	1/770	-
HTOL	B1	JEDEC JE5D02-A108	3	77	Life Test	150C	300 Hours	-	-	-	-	1/770	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	48 Hours	324000	-	-	-	-	-	-
Test Group C - Package Assembly Integrity Tests														
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk=1.67	Wires	1/300	3/900	3/900	3/900	-	-	1/300
WBP	C2	ML-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 3 devices, 30 wires Cpk=1.67	Wires	1/300	3/900	3/900	3/900	-	-	1/300
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	1/150	1/150	-	-	-	-
SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	-	1/150	1/150	1/150	-	-	-
PD	C4	JEDEC JE5D02-B100 and B108	3	10	Physical Dimensions	Cpk=1.67	-	1/100	3/300	3/300	3/300	-	-	1/100
Test Group D - Die Fabrication Reliability Tests														
EM	D1	JE5D41	-	-	Electromigration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDB	D2	JE5D35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JE5D60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	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	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests														
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	1/30	-	1/30	1/30	-	-	1/30
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	1/30	-	1/30	1/30	-	-	1/30
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	1/30	-	1/60	1/60	-	-	-
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk=1.67 Room, hot, and cold	-	3/900	3/900	3/900	3/900	-	-	1/300

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

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40C to +150C

Grade 1 (or Q): -40C to +125C

Grade 2 (or T): -40C to +105C

Grade 3 (or I) : -40C to +85C

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

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

TI Qualification ID: R-CHG-2405-063

Automotive Qualification Summary (As per AEC-Q100 Rev. J and JEDEC Guidelines)

Approve Date 06-December-2024

Product Attributes

Attributes	Qual Device: INA210BQDCKRTL	QBS Process Reference: INA215AQDCKRQ1	QBS Package Reference: TPS3846PH30DBVRQ1	QBS Package Reference: LM74703QDDFRQ1	QBS Package Reference: TXS0101QDCKRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Signal Chain	Signal Chain	Power Management	Power Management	Logic
Wafer Fab Supplier	AIZU	AIZU	RFAB	RFAB	RFAB
Assembly Site	CDAT	TFME	CDAT	CDAT	CDAT
Package Group	SOT	SOT	SOT	SOT	SOT
Package Designator	DCK	DCK	DBV	DDF	DCK
Pin Count	6	6	5	8	6

QBS: Qual By Similarity, also known as Generic Data

Qual Device INA210BQDCKRTL is qualified at MSL1 260C

Note 1: Qual device and affected devices in PCN have justification to use Package QBS references for HAST, AC/UHAST and TC-BP based on AEC-100J A1.3 assembly site and package attributes were qualified.

Note 2: Qual device and affected devices in PCN have justification to use Process QBS references for HTOL and ELFR based on AEC-100J A1.2 silicon wafer fab and process attributes were qualified. Group B tests purpose is for silicon defects, they do not get influenced by assembly site or BOM differences.

Note 3: Qual device and affected devices in PCN have justification to use SD QBS based on AEC-100J A1.3 leadframe attributes are qualified.

Note 4: One lot is allowed per AEC-Q100J A1.5.1 Multiple Sites - When the specific product or process attribute to be qualified or requalified will affect more than one wafer fab site or assembly site, a minimum of one lot of testing per affected site is required.

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: INA210BQDCKRTL	QBS Process Reference: INA215AQDCKRQ1	QBS Package Reference: TPS3840PH30DBVRQ1	QBS Package Reference: LM74703QDDFRQ1	QBS Package Reference: TXS0101QDCKRQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 A113	3	77	Preconditioning	MSL1 260C	-	1/Pass Note 4	-	3/Pass	3/Pass	3/Pass
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	Note 1	-	3/231/0	3/231/0	3/231/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	-	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	1/77/0 Note 4	-	-	3/231/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	1/77/0 Note 4	-	3/231/0	3/231/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	Note 1	-	1/5/0	1/5/0	1/5/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	1/45/0 Note 4	-	3/135/0	1/45/0	3/135/0
Test Group B - Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	Note 2	3/231/0	3/231/0	-	1/77/0
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150C	300 Hours	Note 2	-	-	1/77/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	48 Hours	Note 2	3/2400/0	-	-	-
Test Group C - Package Assembly Integrity Tests												
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	1/30/0 Note 4	1/30/0	3/90/0	3/90/0	3/90/0

WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	1/30/0 Note 4	1/30/0	3/90/0	3/90/0	3/90/0
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	Note 3	-	1/15/0	1/15/0	-
SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	Note 3	-	1/15/0	1/15/0	1/15/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	1/10/0 Note 4	-	3/30/0	3/30/0	3/30/0
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	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDDB	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	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	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	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests												
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	1/3/0 Note 4	-	-	-	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	1/3/0 Note 4	-	-	-	-
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0 Note 4	-	-	-	-

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

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40C to +150C

Grade 1 (or Q): -40C to +125C

Grade 2 (or T): -40C to +105C

Grade 3 (or I) : -40C to +85C

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

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

TI Qualification ID: R-CHG-2405-062

Automotive Qualification Summary (As per AEC and JEDEC Guidelines)

Q006 SOT at CDAT
Approve Date 06-December-2024

Product Attributes

Attributes	Q006 Reference:	Q006 Reference:	Q006 Reference:
	<u>TPS3840PH30DBVRQ1</u>	<u>LM74703QDDFRQ1</u>	<u>TXS0101QDCKRQ1</u>
Automotive Grade Level	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125
Product Function	Power Management	Power Management	Logic
Wafer Fab Supplier	RFAB	RFAB	RFAB
Assembly Site	CDAT	CDAT	CDAT
Package Group	SOT	SOT	SOT
Package Designator	DBV	DDF	DCK
Pin Count	5	8	6

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	Q006 Reference: <u>TPS3840PH30DBVRQ1</u>	Q006 Reference: <u>LM74703QDDFRQ1</u>	Q006 Reference: <u>TXS0101QDCKRQ1</u>
Test Group A - Accelerated Environment Stress Tests										
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL1 260C	-	3/Pass	3/Pass	3/Pass
PC	A1.1	-	3	22	SAM Precon Pre	Review for delamination	-	3/66/0	3/66/0	3/66/0
PC	A1.2	-	3	22	SAM Precon Post	Review for delamination	-	3/66/0	3/66/0	3/66/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	3/231/0	Note 1	3/231/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	3/3/0	Note 1	3/3/0
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	3/9/0	Note 1	3/9/0
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	3/9/0	Note 1	3/9/0
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	3/9/0	Note 1	3/9/0
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	3/210/0	Note 1	3/210/0
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	3/66/0	Note 1	3/66/0
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	3/3/0	Note 1	3/3/0

HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	3/9/0	Note 1	3/9/0
HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	3/9/0	Note 1	3/9/0
HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	3/9/0	Note 1	3/9/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	3/231/0	3/231/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC, 1X	Review for delamination	Completed	3/66/0	3/66/0	3/66/0
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	3/3/0	3/3/0	3/3/0
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	3/9/0	3/9/0	3/9/0
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	3/9/0	3/9/0	3/9/0
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	3/9/0	3/9/0	3/9/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	3/210/0	3/210/0	3/210/0
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	3/66/0	3/66/0	3/66/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	3/3/0	3/3/0	3/3/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	3/9/0	3/9/0	3/9/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	3/9/0	3/9/0	3/9/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	3/9/0	3/9/0	3/9/0
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	1000 Hours	3/135/0	1/45/0 Note 1	3/135/0
HTSL	A6.1.1	-	3	1	Cross Section, post HTSL, 1X	Post stress cross section	Completed	3/3/0	1/1/0 Note 1	3/3/0
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	2000 Hours	3/132/0	1/44/0 Note 1	3/132/0
HTSL	A6.2.1	-	3	1	Cross Section, post HTSL, 2X	Post stress cross section	Completed	3/3/0	1/1/0 Note 1	3/3/0
Test Group C - Package Assembly Integrity Tests										
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	3/90/0	3/90/0	3/90/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	3/90/0	3/90/0	3/90/0

This report represents AEC-Q006 7.1 Family Data Usage using technology driver and lead products that are most representative of the technology family.

Note 1: LM74703QDDFRQ1 HAST and HTSL QBS'd to TPS3840PH30DBVRQ1 that has same Assembly site, package, bond pad metal, wire and mold attributes.

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

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40C to +150C

Grade 1 (or Q): -40C to +125C

Grade 2 (or T): -40C to +105C

Grade 3 (or I) : -40C to +85C

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
Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>
TI Qualification ID: R-CHG-2405-062

In performing change qualifications, Texas Instruments follows integrated circuit industry standards in performing defect mechanism analysis and failure mechanism-based accelerated environmental testing to ensure wafer fab process, assembly process and product quality and reliability. As encouraged by these standards, TI uses both product-specific and generic (family) data in qualifying its changes. For devices to be categorized as a 'product qualification family' for generic data purposes, they must share similar product, wafer fab process and assembly process elements. The applicability of generic data (also known at TI as Qualification by Similarity (QBS)) is determined by the Reliability Engineering function following these industry standards. Generic data is shown in the qualification report in columns titled "QBS Process" (for wafer fab process), "QBS Package" (for assembly process) and "QBS Product" (for product family).

ZVEI ID: SEM-PW-02, SEM-PW-13, SEM-PA-18, SEM-PA-08, SEM-PA-07, SEM-PA-11, SEM-TF-01

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