12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20250417001.2
Adding TIEM-PR as additional wafer probe test site and TI Melaka (TIEM) as an additional Assembly and Test site for select package devices
Change Notification / Sample Request

Date: April 23, 2025
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

20250417001.2
Change Notification / Sample Request
Attachments

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
ISO6740FQDWRQ1	NULL
ISO6741FQDWRQ1	NULL
ISO6721BQDRQ1	NULL
ISO7730QDWRQ1	595-ISO7730QDWRQ1
ISO7741FQDWRQ1	ISO7741FQDWRQ1
ISO7740QDWRQ1	NULL
ISO6742QDWRQ1	NULL
ISO6731FQDWRQ1	NULL
ISO6742FQDWRQ1	NULL
ISO7760FQDWRQ1	NULL
ISO6720FBQDRQ1	NULL
ISO7761FQDWRQ1	NULL
ISO6741QDWRQ1	NULL
ISO7730FQDWRQ1	NULL
ISO7762FQDWRQ1	NULL
ISO6721RBQDRQ1	NULL
ISO7740FQDWRQ1	NULL
ISO6731QDWRQ1	NULL
ISO7721FQDWRQ1	NULL
ISO7763FQDWRQ1	NULL
ISO7731QDWRQ1	ISO7731QDWRQ1
ISO6721FBQDRQ1	NULL
ISO7742FQDWRQ1	NULL
ISO7742QDWRQ1	NULL
ISO6740QDWRQ1	NULL
ISO7731FQDWRQ1	ISO7731FQDWRQ1
UCC21550BQDWRQ1	NULL
ISO1640BQDRQ1	NULL
ISO6720BQDRQ1	NULL
ISO7720QDWRQ1	ISO7720QDWRQ1
ISO7721QDWRQ1	ISO7721QDWRQ1
UCC21550AQDWRQ1	NULL
ISO7741QDWRQ1	ISO7741QDWRQ1
UCC5350SBQDRQ1	NULL

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

PCN Number:	20250417001.2	PCN Date:	April 23, 2025
Title:	Adding TIEM-PR as additional wafer probe test site and TI Melaka (TIEM) as an additional Assembly and Test site for select package devices		
Customer Contact:	Change Management team	Dept:	Quality Services
Proposed 1st Ship Date:	October 20, 2025	Estimated Sample Availability:	June 22, 2025

***Sample requests received after** June 22, 2025 **will not be supported.**

Change Type:

☒	Assembly Site	☐	Design	☐	Wafer Bump Material
☒	Assembly Process	☐	Data Sheet	☐	Wafer Bump Process
☒	Assembly Materials	☐	Part number change	☐	Wafer Fab Site
☐	Mechanical Specification	☒	Test Site	☐	Wafer Fab Material
☒	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Process

PCN Details

Description of Change:

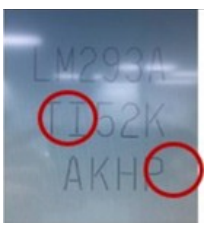
Texas Instruments is pleased to announce TIEM-PR as additional wafer probe test site and TI Melaka (TIEM) as an additional Assembly and Test site for select devices in the SOIC package. Material differences between sites as follows.

Group 1

	Current	Additional
Probe Test Site	TI CDAT (CD-PR)	TI Melaka (TIEM-PR)
Assembly/Test Site	TI Malaysia	TI Melaka
Wire diam/type*	0.96mil Au, 1.0mil Cu	0.8mil Cu
Topside marking (Sample)		
	TI Logo, ECAT (G4)	TI Letter, no ECAT**

*Applicable for UCC5350SBQDRQ1, ISO1640BQDRQ1
**Topside marking is applicable for both Current & additional site

Group 2

	Current	Additional
Probe Test Site	TI CDAT (CD-PR)	TI Melaka (TIEM-PR)
Assembly/Test Site	TI Malaysia, TI Taiwan	TI Melaka
Wire diam/type	0.96mil Au, 1.0mil Cu, 0.8mil Cu	0.8mil Cu
Mold compound	4221499-0008	4221499-1000
Topside marking (Sample)		
	TI Logo, ECAT (G4)	TI Letter, no ECAT*

*Topside marking is applicable for both Current & additional site

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):

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
☒ No Change	☒ No Change	☒ No Change	☒ No Change

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (21L)	Assembly City
TI Malaysia	MLA	MYS	Kuala Lumpur
TI Taiwan	TAI	TWN	Chung Ho, New Taipei City
TI Melaka	**CU6**	**MYS**	**Melaka**

Sample product shipping label (not actual product label)

Group 1 Product Affected:

ISO6721FBQDRQ1	ISO6720BQDRQ1	ISO1640BQDRQ1*
ISO6721RFBQDRQ1	UCC5350SBQDRQ1*	ISO6721RBQDRQ1
ISO6720FBQDRQ1	ISO6721BQDRQ1	

*Probe test site change not applicable

Group 2 Product Affected:

ISO7720FQDWRQ1	ISO7741QDWRQ1	ISO6731FQDWRQ1
ISO7720QDWRQ1	ISO7742FQDWRQ1	ISO6731QDWRQ1
ISO7721FQDWRQ1	ISO7742QDWRQ1	ISO6740FQDWRQ1
ISO7721QDWRQ1	ISO7760FQDWRQ1	ISO6740QDWRQ1
ISO7730FQDWRQ1	ISO7760QDWRQ1	ISO6741FQDWRQ1
ISO7730QDWRQ1	ISO7761FQDWRQ1	ISO6741QDWRQ1
ISO7731FQDWRQ1	ISO7761QDWRQ1	ISO6742FQDWRQ1
ISO7731QDWRQ1	ISO7762FQDWRQ1	ISO6742QDWRQ1
ISO7740FQDWRQ1	ISO7762QDWRQ1	UCC21550AQDWRQ1*
ISO7740QDWRQ1	ISO7763FQDWRQ1	UCC21550BQDWRQ1*
ISO7741FQDWRQ1	ISO7763QDWRQ1	

*Probe test site change not applicable

Group 1 Qualification Data

Automotive Qualification Summary
(As per AEC-Q100 Rev. J and JEDEC Guidelines)
Approve Date 11-December-2024

Product Attributes

Attributes	Qual Device: ISO6721FBQDRQ1	Qual Device: UCC21330BQDRQ1	QBS Process Reference: UCC23513QDWYQ1	QBS Product Reference: UCC21330BQDRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Interface	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB, RFAB	RFAB, RFAB, RFAB	RFAB, RFAB	RFAB, RFAB, RFAB
Assembly Site	TIEMA	TIEMA	TAI	MLA
Package Group	SOIC	SOIC	SOIC	SOIC
Package Designator	D	D	DWY	D
Pin Count	8	16	6	16

QBS: Qual By Similarity, also known as Generic Data
Qual Device ISO6721FBQDRQ1 is qualified at MSL2 260C
Qual Device UCC5350MCQDRQ1 is qualified at MSL2 260C
Qual Device UCC5350SBQDRQ1 is qualified at MSL2 260C
Qual Device UCC5350SBQDRQ1 is qualified at MSL2 260C
Qual Device UCC21330BQDRQ1 is qualified at MSL3 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: ISO6721FBQDRQ1	Qual Device: UCC21330BQDRQ1	QBS Process Reference: UCC23513QDWYQ1	QBS Product Reference: UCC21330BQDRQ1
Test Group A - Accelerated Environment Stress Tests											
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	No Fails	-	-	-
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	No Fails	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Autoclave	121C/15psig	96 Hours	1/77/0	3/231/0	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	3/231/0	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	1/5/0	1/5/0	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	-	-
Test Group B - Accelerated Lifetime Simulation Tests											
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	-	-	3/231/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	48 Hours	-	-	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	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	3/90/0	-	-
SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	-	1/15/0	-	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	1/10/0	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
TDDB	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 Carrier Injection	-	-	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
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											
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	-	-	1/3/0	1/3/0

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: ISO6721FBQDRQ1	Qual Device: UCC21330BQDRQ1	QBS Process Reference: UCC23513QDWYQ1	QBS Product Reference: UCC21330BQDRQ1
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	-	-	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	1/30/0	3/90/0	1/30/0

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-2311-002

Group 2 Qualification Data

Automotive Qualification Summary
(As per AEC-Q100 Rev. J and JEDEC Guidelines)
Approve Date 20-March-2025

Product Attributes

Attributes	Qual Device: ISO7763QDWRQ1	Qual Device: UCC21550BQDWRQ1	QBS Process Reference: UCC23513QDWYQ1	QBS Product Reference: ISO7763QDWRQ1	QBS Product Reference: UCC21550BQDWRQ1
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	Interface	Interface	Power Management	Interface	Power Management
Wafer Fab Supplier	RFAB, RFAB	RFAB, RFAB, RFAB	RFAB, RFAB	RFAB, RFAB	RFAB, RFAB, RFAB
Assembly Site	TIEMA	TIEMA	TAI	MLA	MLA
Package Group	SOIC	SOIC	SOIC	SOIC	SOIC
Package Designator	DW	DW	DWY	DW	DW
Pin Count	16	16	6	16	16

QBS: Qual By Similarity, also known as Generic Data
Qual Device ISO7763QDWRQ1 is qualified at MSL2 260C
Qual Device UCC21550BQDWRQ1 is qualified at MSL2 260C
Qual Device ISO1176TDWR is qualified at MSL2 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: ISO7763QDWRQ1	Qual Device: UCC21550BQDWRQ1	QBS Process Reference: UCC23513QDWYQ1	QBS Product Reference: ISO7763QDWRQ1	QBS Product Reference: UCC21550BQDWRQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	No Fails	No Fails	-	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	3/231/0	1/77/0	-	-	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Autoclave	121C/15psig	96 Hours	3/231/0	-	-	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	1/77/0	-	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	1/5/0	1/5/0	-	-	-
TC-SAM	A4	-	3	3	Post TC SAM	<50% delamination	-	1/12/0	1/12/0	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	3/135/0	-	-	-	-
Test Group B - Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	-	-	3/231/0	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	48 Hours	-	-	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	3/90/0	1/30/0	-	-	-
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	3/90/0	1/30/0	-	-	-
SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	1/15/0	-	-	-	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	3/30/0	1/10/0	-	-	-
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
TDDB	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	Device specific data [1]	Device specific data [2]	1/3/0	1/3/0	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	Device specific data [1]	Device specific data [2]	1/3/0	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	Device specific data [1]	Device specific data [2]	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	1/30/0	3/90/0	1/30/0	1/30/0

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-2311-003
[1] Qual Device: ISO7763QDWRQ1 and QBS Product Reference: ISO7763QDWRQ1 are the same product with same silicon die and bond-out.
[2] Qual Device: UCC21550BQDWRQ1 and QBS Product Reference: UCC21550BQDWRQ1 are the same product with same silicon die and bond-out.

Qualification Data

Automotive Qualification Summary
(As per AEC and JEDEC Guidelines)

Q006 SOIC at TIEM

Approve Date 20-March-2025

Product Attributes

Attributes	Qual Device: ISO7763QDWRQ1
Automotive Grade Level	Grade 1
Operating Temp Range (C)	-40 to 125
Product Function	Interface
Wafer Fab Supplier	RFAB, RFAB
Assembly Site	TIEMA
Package Group	SOIC
Package Designator	DW
Pin Count	16

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: ISO7763QDWRQ1
Test Group A - Accelerated Environment Stress Tests								
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	No Fails
PC	A1.1	-	3	22	SAM Precon Pre	Review for delamination	-	3/66/0
PC	A1.2	-	3	22	SAM Precon Post	Review for delamination	-	3/66/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	3/231/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	3/3/0

HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	3/9/0
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	3/9/0
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	3/9/0
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	3/210/0
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	3/66/0
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	3/3/0
HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	3/9/0
HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	3/9/0
HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	3/9/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	3/66/0
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	3/3/0
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	3/9/0
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	3/9/0
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	3/9/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	3/210/0
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	3/66/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	3/3/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	3/9/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	3/9/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	3/9/0
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	1000 Hours	3/135/0
HTSL	A6.1.1	-	3	1	Cross Section, post HTSL, 1X	Post stress cross section	Completed	3/3/0
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	2000 Hours	3/132/0
HTSL	A6.2.1	-	3	1	Cross Section, post HTSL, 2X	Post stress cross section	Completed	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
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	3/90/0

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-2311-003

ZVEI ID: SEM-PA-18, SEM-PA-08, SEM-PA-11, SEM-PA-13, SEM-PS-04, SEM-TF-01

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).

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