



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20220727000.1**

**Qualification of New Substrate Core Material for Select Devices**

Change Notification / Sample Request

**Date:** July 28, 2022

**To:** Digi- Key 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). For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

PCN Team  
SC Business Services

**20220727000.1**  
**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>
ADS4449IZCR	null
ADS52J90ZZE	null
ADS5401IZAY	null
ADS5403IZAY	null
ADS54T01IZAY	null
AM1802EZWTD3	null
AM1806EZWT3	null
AM1808EZCEA3	null
AM1808EZWT3	null
AM1808EZWT4	null
AM1808EZWTA3	null
AM1808EZWTD4	null
AM3351BZCE30	null
AM3351BZCE30R	null
AM3351BZCE60R	null
AM3351BZCEA30R	null
AM3351BZCEA60	null
AM3352BZCED30	null
AM3352BZCZ100	null
AM3352BZCZ30	null
AM3352BZCZ60	null
AM3352BZCZ80	null
AM3352BZCZA100	null
AM3352BZCZA30	null
AM3352BZCZA60	null
AM3352BZCZA80	null
AM3352BZCZD30	null
AM3352BZCZD60	null
AM3352BZCZD80	null
AM3352BZCZT60R	null
AM3354BZCZ100	null
AM3354BZCZ60	null
AM3354BZCZ80	null
AM3354BZCZA100	null
AM3354BZCZA80	null
AM3354BZCZD60	null
AM3354BZCZD80	null
AM3356BZCZ60	null
AM3356BZCZ80	null
AM3356BZCZA30	null
AM3356BZCZA60	null
AM3356BZCZA80	null
AM3356BZCZD30	null
AM3356BZCZD60	null
AM3357BZCZA80	null
AM3357BZCZD30	null
AM3357BZCZD60	null
AM3358BZCZ100	null
AM3358BZCZ60	null
AM3358BZCZ80	null
AM3358BZCZA100	null
AM3358BZCZA80	null
AM3359BZCZA80	null
AM3505AZCN	null
AM3505AZCNA	null
AM3517AZCN	null
AM3517AZCNA	null
AM4372BZDNA60	null
AM4372BZDNA80	null
AM4376BZDN100	null
AM4376BZDNA100	null

AM4376BZDNA80	null
AM4376BZDND100	null
AM4377BZDNA100	null
AM4378BZDN100	null
AM4378BZDNA100	null
AM4379BZDNA100	null
AMIC110BZCZA	null
CDCU877ANMKR	null
CDCUA877NMKR	null
DAC3482IZAY	null
DAC3482IZAYR	null
DAC3484IZAYR	null
DAC34H84IZAY	null
DRV8601NMBR	null
DS250DF230ZLST	null
F28384SZWTS	null
F28388DZWTS	null
F28M36P63C2ZWTS	null
F28M36P63C2ZWTT	null
HD3SS212ZXHR	null
HD3SS213ZXHR	null
HD3SS214IZXHR	null
HD3SS214ZXHR	null
HD3SS215IZXHR	null
HD3SS215ZXHR	null
MSP430BT5190IZCAT	null
MSP430F2416TZCA	null
MSP430F2418TZCA	null
MSP430F2616TZCA	null
MSP430F2617TZCA	null
MSP430F2618TZCA	null
MSP430F2619TZCA	null
MSP430F477IZCA	null
MSP430F5308IZXH	null
MSP430F5309IZXH	null
MSP430F5310IZXH	null
MSP430F5324IZXHR	null
MSP430F5326IZXHR	null
MSP430F5328IZXHR	null
MSP430F5358IZCAT	null
MSP430F5359IZCAR	null
MSP430F5359IZCAT	null
MSP430F5419AIZCAR	null
MSP430F5419AIZCAT	null
MSP430F5436AIZCAT	null
MSP430F5438AIZCAT	null
MSP430F5508IZXH	null
MSP430F5509IZXH	null
MSP430F5510IZXH	null
MSP430F5522IZXHR	null
MSP430F5524IZXHR	null
MSP430F5526IZXH	null
MSP430F5526IZXHR	null
MSP430F5528IZXH	null
MSP430F5528IZXHR	null
MSP430F5659IZCAR	null
MSP430F5659IZCAT	null
MSP430F6659IZCAR	null
MSP430F6659IZCAT	null
MSP430FG4616IZCA	null
MSP430FG4618IZCA	null
MSP430FG4618IZCAT	null
MSP430FG479IZCA	null
MSP430FG6626IZCAT	null
MSP430FR5962IZVWR	null
MSP430FR5964IZVWR	null
MSP430FR5992IZVWR	null
MSP430FR5994IZVW	null
MSP430FR5994IZVWR	null
MSP432E411YTZAD	null
MSP432E411YTZADR	null
MSP432P401MIZXHR	null
MSP432P401MIZXHT	null
MSP432P401RIZXHR	null

MSP432P401RIZXHT	null
OMAP5910JZVL2	null
OMAPL138EZCE3	null
OMAPL138EZCEA3	null
OMAPL138EZCEA3R	null
OMAPL138EZCED4	null
OMAPL138EZWT3	null
OMAPL138EZWT4	null
OMAPL138EZWTA3	null
OMAPL138EZWTA3R	null
OMAPL138EZWTD4	null
OMAPL138EZWTD4E	null
PCI1510ZWS	null
PCI1520IZWT	null
PCI1520ZWT	null
RM46L852CZWTT	null
RM48L952DZWTT	null
RM57L843BZWTT	null
SN65DSI83ZXHR	null
SN65DSI84ZXHR	null
SN65DSI85ZXHR	null
SN65DSI86ZXHR	null
SN65LVCP114ZJA	null
SN65LVDS301ZXH	null
SN65LVDS301ZXHR	null
SN65LVDS302ZXHR	null
SN74AVC24T245NMUR	null
SN74AVC32T245NMJR	null
SN74AVCH24T245NMUR	null
SN74LVCH32373ANMJR	null
TLV320AIC3106IZXHR	null
TM4C123GH6ZXR17	null
TM4C1290NCZADI3R	null
TM4C1290NCZADT3	null
TM4C1294NCZADT3	null
TM4C1297NCZADI3	null
TM4C1299KCZADI3	null
TM4C1299NCZADI3	null
TM4C129CNCZADI3R	null
TM4C129CNCZADT3	null
TM4C129ENCZADT3	null
TM4C129LNCZADT3	null
TM4C129XKCZADI3	null
TM4C129XNCZADI3	null
TM4C129XNCZADI3R	null
TMS320C5505AZCH10	null
TMS320C5505AZCH12	null
TMS320C5505AZCH15	null
TMS320C5505AZCHA10	null
TMS320C5505AZCHA12	null
TMS320C5515AZCH10	null
TMS320C5515AZCH12	null
TMS320C5515AZCHA12	null
TMS320C5517AZCHA20	null
TMS320C5535AZAY10	null
TMS320C5535AZAYA05	null
TMS320C5535AZAYA10	null
TMS320C6205DZWT200	null
TMS320C6746EZCEA3	null
TMS320C6746EZWT3	null
TMS320C6746EZWT4	null
TMS320C6746EZWTA3	null
TMS320C6746EZWTD4	null
TMS320C6748EZCED4	null
TMS320C6748EZWT3	null
TMS320C6748EZWT4	null
TMS320C6748EZWTA3	null
TMS320C6748EZWTD4	null
TMS320DM355DZCE216	null
TMS320DM355ZCEA216	null
TMS320DM365ZCE21	null
TMS320DM365ZCE27	null
TMS320DM365ZCE30	null
TMS320DM365ZCED30	null

TMS320DM368ZCE	null
TMS320DM368ZCED	null
TMS320DM368ZCEDF	null
TMS320DM368ZCEF	null
TMS320F28015NMFA	null
TMS320F2806NMFA	null
TMS320F2806NMFAR	null
TMS320F2808NMFS	null
TMS320F2809NMFA	null
TMS320F2812GBBS	null
TMS320F2812ZAYA	null
TMS320F2812ZAYAR	null
TMS320F28334ZAYA	null
TMS320F28335ZAYA	null
TMS320F28375DZWTS	null
TMS320F28375DZWTT	null
TMS320F28375SZWTT	null
TMS320F28377DZWTS	null
TMS320F28377DZWTT	null
TMS320F28377SZWTS	null
TMS320F28377SZWTT	null
TMS320F28379DZWTS	null
TMS320F28379DZWTT	null
TMS320F28379SZWTT	null
TMS320VC5416ZWS160	null
TMS320VC5501GBE300	null
TMS320VC5502ZAV300	null
TMS320VC5506ZAY	null
TMS320VC5507ZAY	null
TMS320VC5509AGBB	null
TMS320VC5509AZAY	null
TMS320VC5510AZAVA2	null
TMS32C6205DZWTA200	null
TPA6203A1NMBR	null
TPA6205A1NMBR	null
TPS650830ZAJT	null
TPS650830ZCGR	null
TPS650830ZCGT	null
TPS658643ZWSR	null
TPS6590376ZWSR	null
TPS6590376ZWST	null
TPS6590377ZWST	null
TPS6590378ZWSR	null
TPS6590378ZWST	null
TPS6590379ZWSR	null
TPS6590379ZWST	null
TPS6591104DA2NMA	null
TPS659110A2NMAR	null
TPS659112A2NMAR	null
TPS6591133A2NMA	null
TPS659114A2NMAR	null
TPS65911AA2NMAT	null
TPS65920A2ZCHR	null
TPS65921B1ZBHR	null
TPS65921BZBHR	null
TPS65930A2ZCH	null
TPS65930A2ZCHR	null
TPS65950A2ZXN	null
TPS65950A2ZXNR	null
TPS65950A3ZXN	null
TPS65950A3ZXNR	null
TPS65951A1ZWSR	null
TPS65982ABZBHR	null
TPS65982DMCZBHR	null
TPS65983BAZBHR	null
TS3DDR4000ZBAR	null
TUSB1310AZAY	null
TUSB1310AZAYR	null
TUSB1310ZAY	null
TWL6040A3ZBHR	null
TXB0104NMNR	null
TXB0108NMER	null
TXS0104ENMNR	null
TXS0108ENMER	null

UCD90320UZWSR	null
UCD90320UZWST	null
UCD90320ZWST	null
XIO1100ZWSR	null
XIO2000AZAV	null
XIO2001ZAJ	null
XIO2001ZWS	null
XIO2213BIZAY	null
XIO2213BZAY	null

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

<b>PCN Number:</b>	20220727000.1	<b>PCN Date:</b>	July 28, 2022								
<b>Title:</b>	Qualification of New Substrate Core Material for Select Devices										
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services								
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Oct 28, 2022	<b>Sample requests accepted until:</b>	Aug 28, 2022*								
*Sample requests received after (Aug 28, 2022) will not be supported.											
<b>Change Type:</b>											
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design								
<input 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 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 type="checkbox"/>	Wafer Fab Site								
		<input type="checkbox"/>	Wafer Fab Materials								
		<input type="checkbox"/>	Wafer Fab Process								
<b>PCN Details</b>											
<b>Description of Change:</b>											
Texas Instruments is pleased to announce the qualification of a new substrate core material for Select Devices listed in the "Product Affected" Section.											
<table border="1"> <thead> <tr> <th>What</th> <th>Current</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>Substrate Core material</td> <td>E679FGB/E679FGB(M)</td> <td>HL832NX(A-HS)</td> </tr> </tbody> </table>				What	Current	New	Substrate Core material	E679FGB/E679FGB(M)	HL832NX(A-HS)		
What	Current	New									
Substrate Core material	E679FGB/E679FGB(M)	HL832NX(A-HS)									
<b>Reason for Change:</b>											
Continuity of supply											
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>											
None											
<b>Impact on Environmental Ratings</b>											
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.											
<table border="1"> <thead> <tr> <th>RoHS</th> <th>REACH</th> <th>Green Status</th> <th>IEC 62474</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> </tr> </tbody> </table>				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
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								
<b>Changes to product identification resulting from this PCN:</b>											
None											
<b>Product Affected:</b>											
Refer to page 2 of this document to view your affected products											

## Qualification Report

Approve Date 17-May-2017

### Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: F761516ZAV	QBS Device: D771586ZKB
THB	Temperature Humidity Bias, 85C/85%RH	1000 Hours	QBS Device	3/231/0
UHA ST	Unbiased HAST 110C/85%RH	264 Hours	3/230/0	-

TC	Temperature Cycle, -55/125C	1000 Cycles	3/231/0	-
CDM	ESD - CDM	250 V	1/3/0	-

- QBS: Qualification By Similarity  
- Qual Device F761516ZAV and QBS Device D771586ZKB are qualified at LEVEL3-260C  
- 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/>

**Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

## Qualification Report

Approve Date 08-June-2015

### Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>TNETV1061ZWC</u>	QBS Package Reference: <u>TMS320C6748BZ WTA3E</u>
HTOL	Life Test, 125C	1000 hours	3/231/0	-
HTSL	High Temp Storage Bake 150C	1000 hours	3/179/0	3/231/0
PD	Physical Dimensions	(per mechanical drawing)	1/10/0	-
TC	Temperature Cycle, -55/125C	1000 cycles	3/231/0	3/231/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 hours	QBS device	3/77/0
UHA ST	Unbiased HAST 110C/85%RH	264 hours	3/231/0	3/231/0
WBP	Bond Strength	76 ball bonds, min. 3 units	3/228/0	3/228/0

- QBS: Qual By Similarity  
- Qual Device TNETV1061ZWC is qualified at LEVEL4-260C  
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/>

Qualified Pb-Free(SMT) and Green

## Qualification Report

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

Approve Date 10-Jan-2019

### 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: CODMIOAZWCR	Process QBS: TPS2543QRTERQ1
<b>Test Group A – Accelerated Environment Stress Tests</b>								
PC	A	JEDEC J-	3	77	Preconditioning	Level 2-	No Fails	No Fails



Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: CODMIOAZWCR	Process QBS: TPS2543QRTERQ1
	1	STD-020 JESD22-A113				260C		
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	1/77/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	1/77/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	Wires	1/5/0	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	-	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	1/77/0	3/231/0
<b>Test Group B – Accelerated Lifetime Simulation Tests</b>								
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test 125C	1000 Hours	1/77/0	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	24 Hours	-	3/2400/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	1000 Hours	-	-
<b>Test Group C – Package Assembly Integrity Tests</b>								
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear Cpk>1.67	Wires	1/30/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull Cpk>1.67	Wires	1/30/0	1/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	-	-	1/15/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	3/30/0	3/30/0
SBS	C5	AEC Q100-010	3	50	Solder Ball Shear (Cpk>1.67)	Solder Balls	3/96/0	
<b>Test Group D – Die Fabrication Reliability Tests</b>								
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Tddb	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology	Completed Per Process Technology

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: CODMIOAZWCR	Process QBS: TPS2543QRTERQ1
							Requirements	Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
<b>Test Group E – Electrical Verification Tests</b>								
HBM	E2	AEC Q100-002	1	3	ESD – HBM	1500 V	1/3/0	-
						2000 V	-	1/3/0
CDM	E3	AEC Q100-011	1	3	ESD – CDM	500 V (all pins) 750V (corner pins only)	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up (125C)	Per AEC Q100-004	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions (-40, 25C, 125C)	Cpk>1.6 7	3/90/0	3/90/0

- QBS: Qual By Similarity

- Qual Device is qualified at LEVEL3-260C

**A1 (PC): Preconditioning:**

Performed for THB, Biased HAST, AC, uHAST & TC 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

## Qualification Report

### Automotive New Product Qualification Summary

(As per AEC-Q100 and JEDEC Guidelines)

Approve Date 16-Dec-2013

### 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: TMS320DM6437ZWTQ6
<b>Test Group A – Accelerated Environment Stress Tests</b>							
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 3-260C	No Fails
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 110C/85%RH	264 Hours	3/231/0
UHA ST	A3	JEDEC JESD22-A102	3	77	Unbiased HAST 110C/85%RH	96 Hours	3/231/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TMS320DM6437ZWTQ6
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -55/125C	1000 Cycles	3/231/0
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Post Temp Cycle Bond Pull	Wires	-
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	3/231/0
<b>Test Group B – Accelerated Lifetime Simulation Tests</b>							
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-
ELFR	B2	AEC Q100-008	3	800	Auto Early Life Failure Rate Grade 1	150C(24 Hrs)	-
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A
<b>Test Group C – Package Assembly Integrity Tests</b>							
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear, Cpk>1.67	Wires	3/90/0
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull, Cpk>1.67	Wires	3/90/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free Solder	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Solder	-
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	3/96/0
<b>Test Group D – Die Fabrication Reliability Tests</b>							
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements
TDDB	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements
<b>Test Group E – Electrical Verification Tests</b>							
HBM	E2	AEC Q100-002	1	3	Auto ESD HBM	2000V	-
CDM	E3	AEC Q100-011	1	3	Auto ESD CDM	250V	3/9/0
LU	E4	AEC Q100-004	1	6	Auto Latch-up	25C, 125C	-
ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	-

- QBS: Qual By Similarity

- Qual Device TMS320DM6437ZWTQ6 is qualified at LEV EL3-260CG

**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 your local Field Sales Representative.

<b>Location</b>	<b>E-Mail</b>
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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