



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20220617000.2B**

**Qualification of TI Chengdu as an additional  
Assembly and Test site for select devices**  
Change Notification / Sample Request

**Date:** January 13, 2023  
**To:** Digi- Key PCN

Dear Customer:

**Revision B** update the change description to include a Tape and Reel/Carrier Tape dimension change.

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.

Sincerely,

PCN Team  
SC Business Services

**20220617000.2B**  
**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 sixty (60) months. The corresponding customer part number is also listed, if available.

<b>DEVICE</b>	<b>CUSTOMER PART NUMBER</b>
LM73605QRNPRQ1	null
LM73605QRNPTQ1	null
LM73606QRNPRQ1	null
LM73606QRNPTQ1	null
LM76002QRNPRQ1	null
LM76003QRNPRQ1	null
LM76003QRNPTQ1	null
LM76005QRNPRQ1	null

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

<b>PCN Number:</b>	20220617000.2B	<b>PCN Date:</b>	January 13, 2023
<b>Title:</b>	Qualification of TI Chengdu as an additional Assembly and Test site 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>	Dec 17, 2022	<b>Sample requests accepted until:</b>	N/A

<b>Change Type:</b>			
<input checked="" 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 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 Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process

**PCN Details**

**Description of Change:**

**Revision B** is to update the change description to include a Tape and reel/Carrier Tape dimension change for devices that are highlighted and **bolded** in the device list below that was not included on the original PCN notification.

Texas Instruments is pleased to announce the qualification of TI Chengdu as additional Assembly and Test Site for Select Devices listed in the "Product Affected" Section. Material differences are as follows.

Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly City
UTAC	NSE	THA	Bangkok
TI Chengdu	CDA	CHN	Chengdu

**Material and Test site Differences:**

	UTAC	TI Chengdu
Mount Compound	PZ0035	4207123
Lead finish	Matte Sn	NiPdAu

Upon expiry of this PCN TI will combine lead free solutions in a single **standard part number**, for the devices in the "Product Affected" Section. For example; **LM73605QRNPRQ1** – can ship with both Matte Sn and NiPdAu.

Example:

- Customer order for 7500 units of LM73605QRNPRQ1 with 2500 units SPQ (Standard Pack Quantity per Reel).
- TI can satisfy the above order in one of the following ways.
  - I. 3 Reels of NiPdAu finish.
  - II. 3 Reels of Matte Sn finish
  - III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish.
  - IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish.

**Marking Differences:**

	UTAC	TI Chengdu

RNP Package	<p>LM73605R NPQ1 TI YMJ PLLLL <b>G3</b></p> <p>O</p> <p>TI = TI LETTERS YM = YEAR MONTH DATE CODE LLLL = ASSEMBLY LOT CODE J = PRIMARY SITE CODE P = SECONDARY SITE CODE O = PIN 1 INDICATOR</p>	<p>LM73605R NPQ1 TI YMS LLLL <b>G4</b></p> <p>O</p> <p>TI = TI LETTERS YM = YEAR MONTH DATE CODE LLLL = ASSEMBLY LOT CODE S = ASSEMBLY SITE CODE O = PIN 1 INDICATOR</p>
RHD Package	<p>LP8733 22-Q1 TI YMS LLLL <b>G3</b></p> <p>O</p> <p>TI = TI LETTERS YM = YEAR MONTH DATE CODE LLLL = ASSEMBLY LOT CODE S = ASSEMBLY SITE CODE O = PIN 1 INDICATOR</p>	<p>LP8733 22-Q1 TI YMS LLLL <b>G4</b></p> <p>O</p> <p>TI = TI LETTERS YM = YEAR MONTH DATE CODE LLLL = ASSEMBLY LOT CODE S = ASSEMBLY SITE CODE O = PIN 1 INDICATOR</p>
ECAT	<b>G3</b>	<b>G4</b>

Test coverage, insertions, conditions will remain consistent with current testing.

**Package Outline Drawing Differences:**

	<b>UTAC</b>	<b>TI Chengdu</b>
RNP Package Drawing		
RHD Package Drawing		
Wettable Flank design	Step Cut	Dimple

**Pack (Tape & Reel) change:**

What	Current	New
Reel Width	16.4mm	<b>12.4mm</b>

Carrier Tape Width	16 mm	<b>12mm</b>
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**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
<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:**

Assembly Site		
UTAC	Assembly Site Origin (22L)	ASO: NSE
CDAT	Assembly Site Origin (22L)	ASO: CDA

Sample product shipping label (not actual product label)

G3 = Matte Sn  
G4 = NiPdAu



(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

**TEXAS INSTRUMENTS**  
MADE IN: Malaysia  
2DC: 2Q:  
MSL 2 /260C/1 YEAR SEAL DT  
MSL 1 /235C/UNLIM 03/29/04  
OPT:  
ITEM: 39  
LBL: 5A (L)T0:1750

**Product Affected:**

<b>LM73605QRNPRQ1</b>	LP873221RHDT Q1	LP87324ARHDRQ1	LP87332ARHDRQ1
<b>LM73605QRNPTQ1</b>	LP873222RHDRQ1	LP873300RHDRQ1	LP87332ARHDT Q1
<b>LM73606QRNPRQ1</b>	LP873222RHDT Q1	LP873300RHDT Q1	LP87332BRHDRQ1
<b>LM73606QRNPTQ1</b>	LP87322ERHDRQ1	LP87331BRHDRQ1	LP87332BRHDT Q1
<b>LM76002QRNPRQ1</b>	LP87322ERHDT Q1	LP87331BRHDT Q1	LP87332DRHDRQ1
<b>LM76002QRNPTQ1</b>	LP87322FRHDRQ1	LP873321RHDRQ1	LP87332DRHDT Q1
<b>LM76003QRNPRQ1</b>	LP87322FRHDT Q1	LP873321RHDT Q1	LP873343RHDRQ1
<b>LM76003QRNPTQ1</b>	LP873241RHDRQ1	LP873322RHDRQ1	LP873343RHDT Q1
<b>LM76005QRNPRQ1</b>	LP873241RHDT Q1	LP873324RHDRQ1	LP873344RHDRQ1
LP873200RHDRQ1	LP873242RHDRQ1	LP873324RHDT Q1	LP873344RHDT Q1
LP873200RHDT Q1	LP873242RHDT Q1	LP873325RHDRQ1	LP873349RHDRQ1
LP873220RHDRQ1	LP873244RHDRQ1	LP873325RHDT Q1	LP87334ARHDRQ1
LP873220RHDT Q1	LP873244RHDT Q1	LP873327RHDRQ1	TPS6565342RHDRQ1
LP873221RHDRQ1	LP873245RHDRQ1	LP873327RHDT Q1	TPS6565342RHDT Q1

**RHD Qualification Report**  
Automotive New Product Qualification Summary  
(As per AEC-Q100 and JEDEC Guidelines)  
Approve Date 09-June-2022

**Product Attributes**

Attributes	Qual Device: <u>LP873322RHDRQ1</u>	QBS Reference: <u>LM2775QDSGRQ1</u>	QBS Reference: <u>LP87332ARHDRQ1</u>	QBS Reference: <u>DRV8703QRHBRO1</u>
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	Power Management	Power Management	Power Management	Signal Chain
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB
Assembly Site	CDAT	CDAT	UTL1	CDAT
Package Group	QFN	QFN	QFN	QFN
Package Designator	RHD	DSG	RHD	RHB
Pin Count	28	8	28	32

QBS: Qual By Similarity

Qual Device LP873322RHDRQ1 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: <u>LP873322RHDRQ1</u>	QBS Reference: <u>LM2775QDSGRQ1</u>	QBS Reference: <u>LP87332ARHDRQ1</u>	QBS Reference: <u>DRV8703QRHBRO1</u>
<b>Test Group A - Accelerated Environment Stress Tests</b>											
PC	A1	JEDEC JSTD-020 JESD22A113	3	7/7	Preconditioning	MSL2 260C	-	-	Pass	Pass	Pass
HAST	A2	JEDEC JESD22-A110	3	7/7	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	3/231/0
AC/UH AST	A3	JEDEC JESD22A102/JEDEC JESD22-A118	3	7/7	Autoclave	121C/15psig	96 Hours	-	3/231/0	-	3/231/0
AC/UH AST	A3	JEDEC JESD22A102/JEDEC JESD22A118	3	7/7	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
TC	A4	JEDEC JESD22A104 and Appendix 3	3	7/7	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	3/15/0	3/15/0	3/15/0

PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	1/45/0	1/45/0	-
HTSL	A6	JEDEC JESD22A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	3/135/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175C	500 Hours	-	3/135/0	-	-
<b>Test Group B - Accelerated Lifetime Simulation Tests</b>											
HTOL	B1	JEDEC JESD22-A108	1	77	Life Test	125C	1000 Hours	-	3/231/0	-	-
HTOL	B1	JEDEC JESD22A108	1	77	Life Test	150C	1000 Hours	-	-	3/231/0	-
ELFR	B2	AEC Q100008	1	77	Early Life Failure Rate	150C	24 Hours	-	-	3/2400/0	-
<b>Test Group C - Package Assembly Integrity Tests</b>											
WBS	C1	AEC Q100001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	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	3/90/0	3/90/0	3/90/0
SD	C3	JEDEC JESD22B102	1	15	PB Solderability	>95% Lead Coverage	-	1/15/0	1/15/0	-	1/15/0
SD	C3	JEDEC JESD22-B102	1	15	PB-Free Solderability	>95% Lead Coverage	-	1/15/0	1/15/0	-	1/15/0
PD	C4	JEDEC JESD22B100 and B108	1	10	Physical Dimensions	Cpk>1.67	-	1/10/0	3/30/0	3/30/0	3/30/0
<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
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	D 3	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
NBTI	D 4	-	-	-	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	D 5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
<b>Test Group E - Electrical Verification Tests</b>											
ESD	E 2	AEC Q100002	1	3	ESD HBM	-	2000 Volts	-	-	1/3/0	1/3/0
ESD	E 3	AEC Q100011	1	3	ESD CDM	-	500 Volts	-	-	1/3/0	1/3/0
LU	E 4	AEC Q100004	1	6	Latch-Up	Per AEC Q100-004	-	-	-	1/6/0	1/6/0
ED	E 5	AEC Q100009	3	30	Electrical Distributions		-	1/30/0	3/90/0	3/90/0	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/>

## RNP Qualification Report

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

Approve Date 09-June-2022

#### Product Attributes

Attributes	Qual Device:	Qual Device:	QBS Reference:	QBS Reference:	QBS Reference:
	<a href="#">LM73605QRNPRQ1</a>	<a href="#">LM76005QRNPRQ1</a>	<a href="#">PCM6260QRTVRQ1</a>	<a href="#">DRV8703QRHBRQ1</a>	<a href="#">LM46002AQPWRQ1</a>
<b>Automotive Grade Level</b>	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
<b>Operating Temp Range (C)</b>	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125
<b>Product Function</b>	Power Management	Power Management	Signal Chain	Signal Chain	Power Management
<b>Wafer Fab Supplier</b>	MH8	MH8	RFAB	RFAB	MH8
<b>Assembly Site</b>	CDAT	CDAT	CDAT	CDAT	TAI
<b>Package Group</b>	QFN	QFN	QFN	QFN	TSSOP
<b>Package Designator</b>	RNP	RNP	RTV	RHB	PWP
<b>Pin Count</b>	30	30	32	32	16

QBS: Qual By Similarity

Qual Device LM73605QRNPRQ1 and LM76005QRNPRQ1 are qualified at MSL2 260C

### Qualification Results

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

Type	#	Test Spec	M in Lot Qty	S / L ots	Test Name	Condition	Duration	Qual Device: <a href="#">LM73605QRNPRQ1</a>	Qual Device: <a href="#">LM76005QRNPRQ1</a>	QBS Reference: <a href="#">PCM6260QRTVRQ1</a>	QBS Reference: <a href="#">DRV8703QRHBRQ1</a>	QBS Reference: <a href="#">LM46002AQPWRQ1</a>
<b>Test Group A - Accelerated Environment Stress Tests</b>												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	7	Preconditioning	MSL2 260C	1 Step	Pass	-	Pass	Pass	-
PC	A1	JEDEC J-STD-020 JESD22A113	3	7	Preconditioning	MSL3 260C	1 Step	-	-	-	-	Pass
HAST	A2	JEDEC JESD22-A110	3	7	Biased HAST	130C/8 5%RH	96 Hours	-	-	3/231/0	3/231/0	-
HAST	A2	JEDEC JESD22-A110	3	7	Temperature Humidity Bias	85C/85 %RH	1000 Hours	-	-	-	-	3/231/0
AC/UH AST	A3	JEDEC JESD22A102/ JEDEC JESD22A118	3	7	Autoclave	121C/1 5psig	96 Hours	3/231/0	-	-	-	3/231/0
AC/UH AST	A3	JEDEC JESD22A102/ JEDEC JESD22A118	3	7	Unbiased HAST	130C/8 5%RH	96 Hours	-	-	3/231/0	3/231/0	-
TC	A4	JEDEC JESD22A104 and Appendix 3	3	7	Temperature Cycle	- 65C/15 0C	500 Cycles	3/231/0	-	3/231/0	3/231/0	-

TC-BP	A 4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	3/15/0	-	-	3/15/0	1/5/0
PTC	A 5	JEDEC JESD22A105	1	4 5	PTC	- 40/125 C	1000 Cycle s	-	-	1/45/0	-	-
HTSL	A 6	JEDEC JESD22A103	1	4 5	High Temperat ure Storage Life	150C	1000 Hour s	-	-		3/135/0	3/135/0
<b>Test Group B - Accelerated Lifetime Simulation Tests</b>												
HTOL	B 1	JEDEC JESD22A108	1	7 7	Life Test	125C	1000 Hour s	-	-	3/231/0	-	-
ELFR	B 2	AEC Q100008	1	7 7	Early Life Failure Rate	125C	48 Hour s	-	-	3/2400/0	-	-
ELFR	B 2	AEC Q100008	1	7 7	Early Life Failure Rate	150C	24 Hour s	-	-	-	-	3/2400/0
<b>Test Group C - Package Assembly Integrity Tests</b>												
WBS	C 1	AEC Q100001	1	3 0	Wire Bond Shear	Minimu m of 5 devices , 30 wires Cpk>1.6 7	Wires	3/90/0	1/30/0	3/90/0	3/90/0	3/90/0
WBP	C 2	MIL-STD883 Method 2011	1	3 0	Wire Bond Pull	Minimu m of 5 devices , 30 wires Cpk>1.6 7	Wires	3/90/0	1/30/0	3/90/0	3/90/0	3/90/0
SD	C 3	JEDEC JESD22- B102	1	1 5	PB Solderabili ty	>95% Lead Coverag e	-	1/15/0	-	1/15/0	1/15/0	1/15/0
SD	C 3	JEDEC JESD22B102	1	1 5	PB-Free Solderabili ty	>95% Lead Coverag e	-	1/15/0	-	1/15/0	1/15/0	1/15/0
PD	C 4	JEDEC JESD22B100 and B108	1	1 0	Physical Dimension s	Cpk>1.6 7	-	3/30/0	1/10/0	3/30/0	3/30/0	3/30/0
<b>Test Group D - Die Fabrication Reliability Tests</b>												
EM	D 1	JESD61	-	-	Electromig ration	-	-	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts
TDDB	D 2	JESD35	-	-	Time Dependen t Dielectric Breakdow n	-	-	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts	Completed Per Process Technology Requiremen ts

HCI	D 3	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
NBTI	D 4	-	-	-	Negative 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	D 5	-	-	-	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
<b>Test Group E - Electrical Verification Tests</b>												
ESD	E 2	AEC Q100002	1	3	ESD HBM	-	2000 Volts	-	-	1/3/0	1/3/0	1/3/0
ESD	E 3	AEC Q100011	1	3	ESD CDM	-	500 Volts	-	-	1/3/0	1/3/0	1/3/0
LU	E 4	AEC Q100004	1	6	Latch-Up	Per AEC Q100-004	-	-	-	1/6/0	1/6/0	1/6/0
ED	E 5	AEC Q100009	3	30	Electrical Distributions	Cpk> 1.67 Room, hot, and cold	-	1/30/0	1/30/0	3/90/0	3/90/0	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/>

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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