12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20251015000.2
Qualification of MLA as an additional Assembly/Test site for select devices
Change Notification / Sample Request

Date: October 17, 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

20251015000.2
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**
TPS2H000BQPWPRQ1	TPS2H000BQPWPRQ1
TPS1H000AQDGNRQ1	TPS1H000AQDGNRQ1
TPS92515AHVQDGQTQ1	TPS92515AHVQDGQTQ1
TPS4H000BQPWPRQ1	TPS4H000BQPWPRQ1
UCC5350MCQDWVRQ1	UCC5350MCQDWVRQ1
TPS92515HVQDGQRQ1	TPS92515HVQDGQRQ1
TPS7B6701QPWPRQ1	NULL
TPS92630QPWPRQ1	TPS92630QPWPRQ1
TPS1H100AQPWPRQ1	TPS1H100AQPWPRQ1
TPS92515HVQDGQTQ1	TPS92515HVQDGQTQ1
TPS92515AHVQDGQRQ1	TPS92515AHVQDGQRQ1
TPS1H200AQDGNRQ1	TPS1H200AQDGNRQ1
TPS92515QDGQRQ1	TPS92515QDGQRQ1
UCC5390ECQDWVRQ1	UCC5390ECQDWVRQ1
TPS1H100BQPWPRQ1	TPS1H100BQPWPRQ1
LP8863ADCPRQ1	LP8863ADCPRQ1
TPS7A6650QDGNRQ1	TPS7A6650QDGNRQ1

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

PCN Number:	20251015000.2	**PCN Date:**	October 17, 2025

Title:	Qualification of MLA as an additional Assembly/Test site for select devices

Customer Contact:	Change Management team	**Dept:**	Quality Services
Proposed 1st Ship Date:	April 15, 2026	**Sample requests accepted until:**	December 16, 2025*

*Sample requests received after December 16, 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 the qualification of MLA as an additional Assembly/Test site for select devices. Assembly differences are as follows:

Group 1 Device

	ASESH	MLA
Wire diam/type	1.3mil Au	1.3mil Cu
Mount compound	EY1000063	4211470
Mold compound	EN2000515	4211880
Lead finish	NiPdAuAg	NiPdAu
Package outline	DGQ0010E	DGQ0010

Group 2 Device

	ASESH	MLA
Wire diam/type	1.0mil Au	0.96mil Cu
Mount compound	EY1000063	4224264
Mold compound	EN2000515	4211880
Lead finish	NiPdAuAg	NiPdAu
Package outline	DGN0008G	DGN0008A
Marking difference	No mold cavity ID	With mold cavity ID

Group 3 Device

	ASESH	MLA
Mount compound	EY1000063	4211470
Mold compound	EN2000515	4211880
Lead finish	NiPdAuAg	NiPdAu
Package outline	DGN0008G	DGN0008A
Marking difference	No mold cavity ID	With mold cavity ID

Group 4 Device

	TAI	MLA
Mount compound	4208458	4211470
Marking difference*	TI logo, with G4	TI letter, no G4, mold cavity ID
Package outline**	PWP0016J	PWP0016A
Package outline***	PWP0020D	PWP0020N

*Applicable for TPS4H000BQPWPRQ1 & TPS7B6701QPWPRQ1
** Applicable for TPS92630QPWPRQ1 device
*** Applicable for TPS7B6701QPWPRQ1 device

Group 5 Device

	TAI	MLA
Wire diam/type	0.96mil Cu	0.80mil Cu
Marking difference	TI logo, with G4	TI letter, no G4

Group 6 Device – No material differences between sites

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):

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 Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
ASESH	ASH	CHN	Shanghai
TI Taiwan	TAI	TWN	Chung Ho, New Taipei City
TI Malaysia	**MLA**	**MYS**	**Kuala Lumpur**

Sample Product Shipping Label (not actual product label)


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)TO:1750
G4
(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

Group 1 Product Affected:

TPS92515AHVQDGQRQ1	TPS92515HVQDGQRQ1	TPS92515QDGQRQ1
TPS92515AHVQDGQTQ1	TPS92515HVQDGQTQ1	TPS92515QDGQTQ1

Group 2 Product Affected:

TPS7A6633QDGNRQ1	TPS7A6650QDGNRQ1

Group 3 Product Affected:

TPS1H000AQDGNRQ1	TPS1H200AQDGNRQ1

Group 4 Product Affected:

TPS1H100AQPWPRQ1	TPS2H000BQPWPRQ1	TPS7B6701QPWPRQ1
TPS1H100BQPWPRQ1	TPS4H000BQPWPRQ1	TPS92630QPWPRQ1

Group 5 Product Affected:

SN5350MCQDWVRQ1	UCC5350MCQDWVRQ1	UCC5390ECQDWVRQ1

Group 6 Product Affected:

LP8863ADCPRQ1	SN1903001DCPRQ1	SN1903002DCPRQ1

Group 1 Qualification Report

Automotive Qualification Summary

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

Approve Date 31-March-2025

Product Attributes

Attributes	Qual Device: TPS92515QDGQRQ1	QBS Package Reference: SN65HVDA1040AQDRQ1	QBS Process Reference: LM5165QDRCRQ1	QBS Package Reference: TPA6211BTDGNRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 2
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 105
Product Function	Power Management	Interface	-	Signal Chain
Wafer Fab Supplier	RFAB	DL-LIN	RFAB	MH8
Assembly Site	MLA	MLA	CLARK-AT	MLA
Package Group	VSSOP	SOIC	QFN	VSSOP
Package Designator	DGQ	D	DRC	DGN
Pin Count	10	8	10	8

QBS: Qual By Similarity, also known as Generic Data
Qual Device TPS92515QDGQRQ1 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: TPS92515QDGQRQ1	QBS Package Reference: SN65HVDA1040AQDRQ1	QBS Process Reference: LM5165QDRCRQ1	QBS Package Reference: TPA6211BTDGNRQ1
Test Group A - Accelerated Environment Stress Tests											
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL1 260C	-	-	3/828/0	-	-
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	3/0/0	-	3/0/0	3/0/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C	96 Hours	-	3/231/0	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	3/231/0	-	3/231/0	3/231/1[1]
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	110C/85%RH	264 Hours	-	-	3/231/0	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	3/231/0	-	-	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/125C	1000 Cycles	-	-	-	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65/150C	500 Cycles	-	3/231/0	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	-	3/231/0	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	1/5/0	-	-	-
TC-SAM	A4	-	3	3	Post TC SAM	<50% delamination	-	-	-	-	3/36/0
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	-	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	500 Hours	-	-	-	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175C	500 Hours	3/135/0	-	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	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	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	3/90/0
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	1/15/0	-	-
SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	-	1/15/0	1/15/0	1/15/0

PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	3/30/0	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
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
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	-	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	-	-	-	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-2402-087

[1]-Mechanical damage to the top of the package resulting in a die crack was likely caused by the automated handler due to the unit not seated correctly.

Group 2 & 3 Qualification Report

Automotive Qualification Summary

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

Approve Date 03-April-2025

Product Attributes

Attributes	Qual Device: TPS1H200AQDGNRQ1	Qual Device: TPS1H000AQDGNRQ1	QBS Process Reference: TPS653853QDCARQ1	QBS Product Reference: TPS1H000AQDGNRQ1	QBS Package Reference: TPS92515QDGQRQ1
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	Power Management	Power Management	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB
Assembly Site	MLA	MLA	TAI	ASESHAT	MLA
Package Group	VSSOP	VSSOP	TSSOP	VSSOP	VSSOP
Package Designator	DGN	DGN	DCA	DGN	DGQ
Pin Count	8	8	48	8	10

QBS: Qual By Similarity, also known as Generic Data
Qual Device TPS1H200AQDGNRQ1 is qualified at MSL2 260C
Qual Device TPS1H000AQDGNRQ1 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: TPS1H200AQDGNRQ1	Qual Device: TPS1H000AQDGNRQ1	QBS Process Reference: TPS653853QDCARQ1	QBS Product Reference: TPS1H000AQDGNRQ1	QBS Package Reference: TPS92515QDGQRQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	-	-	-	3/0/0	3/0/0
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	-	3/0/0	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	-	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	3/231/0	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	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	-	-	-	-	1/5/0	-	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	-	1/45/0	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1008 Hours	-	-	-	1/77/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175C	500 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	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	-	1/30/0	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	-	1/30/0	3/90/0	3/90/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	1/10/0	-	-	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
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	-	-	1/3/0	-	-
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2500 Volts	-	-	-	1/3/0	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	1/3/0	-	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	750 Volts	-	-	-	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	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-2403-026

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

Approve Date 14-February-2025

Product Attributes

Attributes	Qual Device: TPS7A6633QDGNRQ1	**Qual Device: TPS7A6650QDGNRQ1**	QBS Package Reference: SN65HVDA1040AQDRQ1	**QBS Package Reference: UCC27624QDGNRQ1**	QBS Process Reference: TMP451AQDQFRQ1	QBS Process Reference: TPS65300QPWPRQ1	QBS Product Reference: TPS1H000AQDGNRQ1
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	Power Management	Power Management	Interface	Power Management	Power Management	Power Management	Power Management
Wafer Fab Supplier	DP1DM5	DP1DM5	DL-LIN	DMOS6	DP1DM5	DP1DM5	RFAB
Assembly Site	MLA	MLA	MLA	MLA	UTL1	TAI	ASESHAT
Package Group	VSSOP	VSSOP	SOIC	VSSOP	QFN	TSSOP	VSSOP
Package Designator	DGN	DGN	D	DGN	DQF	PWP	DGN
Pin Count	8	8	8	8	8	24	8

QBS: Qual By Similarity, also known as Generic Data
Qual Device TPS7A6633QDGNRQ1 is qualified at MSL2 260C
Qual Device TPS7A6650QDGNRQ1 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: TPS7A6633QDGNRQ1	Qual Device: TPS7A6650QDGNRQ1	QBS Package Reference: SN65HVDA1040AQDRQ1	QBS Package Reference: UCC27624QDGNRQ1	QBS Process Reference: TMP451AQDQFRQ1	QBS Process Reference: TPS65300QPWPRQ1	QBS Product Reference: TPS1H000AQDGNRQ1
Test Group A - Accelerated Environment Stress Tests														
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL1 260C	-	-	-	3/828/0	3/0/0	3/0/0	-	-
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	-	-	-	-	-	-	3/0/0
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	-	-	-	-	3/0/0	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C	96 Hours	-	-	3/231/0	-	-	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	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	3/231/0	3/231/0	3/231/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65/150C	500 Cycles	-	-	3/231/0	-	-	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	1000 Cycles	-	-	-	-	-	3/231/0	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	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	-	-	-	-	-	1/5/0	1/5/0	1/5/0	-
TC-SAM	A4	-	3	3	Post TC SAM	<50% delamination	-	-	-	-	3/36/0	-	3/36/0	-
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	-	-	-	-	3/135/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	3/231/0	-	-	1/77/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1008 Hours	-	-	-	3/231/0	-	-	1/77/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175C	500 Hours	-	-	-	-	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	-	-	3/231/0	-	-	3/241/1[1]	3/231/0
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150C	408 Hours	-	-	-	-	3/231/0	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	48 Hours	-	-	3/2400/0	-	-	3/2400/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	150C	24 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	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	-	3/90/0
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	-	1/15/0	-	-	-	-
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	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	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	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	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	-	-	-	-	1/3/0	1/3/0	1/3/0
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2500 Volts	-	-	-	-	-	-	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	1500 Volts	-	-	-	-	-	1/3/0	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	-	-	1/3/0	-	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	750 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	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	3/90/0	1/30/0	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/

TI Qualification ID: R-CHG-2403-102

[1]-EOS

Group 4 Qualification Report

Automotive Qualification Summary

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

Approve Date 27-December-2024

Product Attributes

Attributes	Qual Device: TPS4H000BQPWPRQ1	QBS Package Reference: PDRV8912QPWPRQ1	QBS Package Reference: TAS5441QPWPRQ1	QBS Process Reference: TPS653853QDCARQ1	QBS Product Reference: TPS48111LQDGXRQ1	QBS Process, Product Reference: TPS4H000BQPWPRQ1
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	Power Management	Power Management	Signal Chain	Power Management	Power Management	-
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB
Assembly Site	MLA	MLA	MLA	TAI	MLA	TAI
Package Group	TSSOP	-	TSSOP	TSSOP	VSSOP	TSSOP
Package Designator	PWP	PWP	PWP	DCA	DGX	PWP
Pin Count	20	24	16	48	19	20

QBS: Qual By Similarity, also known as Generic Data
Qual Device TPS4H000BQPWPRQ1 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: TPS4H000BQPWPRQ1	QBS Package Reference: PDRV8912QPWPRQ1	QBS Package Reference: TAS5441QPWPRQ1	QBS Process Reference: TPS653853QDCARQ1	QBS Product Reference: TPS48111LQDGXRQ1	QBS Process, Product Reference: TPS4H000BQPWPRQ1
Test Group A - Accelerated Environment Stress Tests													
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	3/0/0	3/0/0	3/0/0	3/0/0	-	1/77/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C	96 Hours	-	3/231/0	3/231/0	-	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	3/231/0	3/231/0	3/231/0	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	-	3/231/0	-	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	3/231/0	-	3/231/0	-	-	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65/150C	1000 Cycles	-	3/210/0	3/231/0	-	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65/150C	500 Cycles	-	3/231/0	3/231/0	-	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	1000 Cycles	-	3/210/0	3/231/0	-	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	3/231/0	3/231/0	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	-	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	1/45/0	1/45/0	1/45/0	-	1/45/0
HTSL	A6	JEDEC JESD22-A103	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	-	-	-
Test Group B - Accelerated Lifetime Simulation Tests													
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	-	3/231/0	3/231/0	3/231/0	-	1/77/0
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	3/15/0	3/90/0	1/30/0	1/30/0	-

WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	1/30/0	3/15/0	3/90/0	1/30/0	1/30/0	-
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	1/15/0	-	-	-	-
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	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	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	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	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
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
Test Group E - Electrical Verification Tests													
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	-	-	-	1/3/0	1/3/0	1/3/0
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	4000 Volts	-	-	1/3/0	-	-	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	1000 Volts	-	-	1/3/0	-	-	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	-	1/3/0	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	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	3/90/0	3/90/0	3/90/0	1/30/0	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/

TI Qualification ID: R-CHG-2403-024

Qualification Report

Automotive Qualification Summary

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

Approve Date 26-March-2025

Product Attributes

Attributes	Qual Device: TPS2H000BQPWPRQ1	Qual Device: TPS1H100BQPWPRQ1	Qual Device: TPS1H100AQPWPRQ1	QBS Package Reference: TPS4H000BQPWPRQ1	QBS Process Reference: DRV8305NEPHPQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 0
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 150
Product Function	Power Management	Power Management	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB
Assembly Site	MLA	MLA	MLA	MLA	TAI
Package Group	TSSOP	TSSOP	TSSOP	TSSOP	QFP
Package Designator	PWP	PWP	PWP	PWP	PHP
Pin Count	16	14	14	20	48

QBS: Qual By Similarity, also known as Generic Data
Qual Device TPS2H000BQPWPRQ1 is qualified at MSL3 260C
Qual Device TPS1H100BQPWPRQ1 is qualified at MSL3 260C
Qual Device TPS1H100AQPWPRQ1 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: TPS2H000BQPWPRQ1	Qual Device: TPS1H100BQPWPRQ1	Qual Device: TPS1H100AQPWPRQ1	QBS Package Reference: TPS4H000BQPWPRQ1	QBS Process Reference: DRV8305NEPHPQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	-	-	3/0/0	3/0/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	3/231/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/150C	1500 Cycles	-	-	-	-	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	3/231/0	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	-	-	1/5/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	-	-	3/135/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	2000 Hours	-	-	-	-	3/135/0
Test Group B - Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150C	1000 Hours	-	-	-	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	150C	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	1/30/0	-	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	1/30/0	-	1/30/0	3/90/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	1/10/0	1/10/0	-	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	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	-	-	-	-	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	-	-	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	-	-	-	-	1/3/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	1/30/0	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/

TI Qualification ID: R-CHG-2410-077

Group 5 Qualification Report

Automotive Qualification Summary

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

Approve Date 28-March-2025

Product Attributes

Attributes	Qual Device: SN5350MCQDWVRQ1	QBS Process, Product Reference: UCC5350MCQDRQ1	QBS Process Reference: ISO5851QDWQ1	QBS Package, Product Reference: ISO6763QDWRQ1	QBS Process, Product Reference: ISO5452DWR
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	Power Management	Interface,Power Management	Interface	Interface	Power Management
Wafer Fab Supplier	DP1DM5, DP1DM5	DP1DM5, DP1DM5	MH8, DP1DM5, DP1DM5	RFAB, RFAB	DP1DM5, DP1DM5, MH8
Assembly Site	MLA	MLA	TAI	MLA	MLA
Package Group	SOIC	SOIC	SOIC	SOIC	SOIC
Package Designator	DWV	D	DW	DW	DW
Pin Count	8	8	16	16	16

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN5350MCQDWVRQ1 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: SN5350MCQDWVRQ1	QBS Process, Product Reference: UCC5350MCQDRQ1	QBS Process Reference: ISO5851QDWQ1	QBS Package, Product Reference: ISO6763QDWRQ1	QBS Process, Product Reference: ISO5452DWR
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	-	1/0/0	3/0/0	3/0/0	1/0/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Autoclave	121C/15psig	96 Hours	-	1/77/0	1/77/0	3/231/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	1/77/0	1/77/0	3/231/0	1/77/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	1/77/0	-	3/135/0	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175C	500 Hours	-	-	1/45/0	-	-
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	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	3/90/0	1/30/0	1/30/0	3/90/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	3/30/0	1/10/0	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	-	1/3/0	1/3/0	-	-
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	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-2409-068

Group 6 Qualification Report

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

Approve Date 08-March-2025

Product Attributes

Attributes	Qual Device: LP8863ADCPRQ1	QBS Package Reference: LM63615DQPWPRQ1	QBS Process, Product Reference: LP8880DCPRQ1	QBS Package Reference: TPS929240QDCPRQ1	QBS Package, Process, Product Reference: TPS4H000BQPWPRQ1
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	Power Management	Power Management	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB
Assembly Site	MLA	MLA	TAI	MLA	MLA
Package Group	TSSOP	TSSOP	TSSOP	TSSOP	TSSOP
Package Designator	DCP	PWP	DCP	DCP	PWP
Pin Count	38	16	38	38	20

QBS: Qual By Similarity, also known as Generic Data
Qual Device LP8863ADCPRQ1 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: LP8863ADCPRQ1	QBS Package Reference: LM63615DQPWPRQ1	QBS Process, Product Reference: LP8880DCPRQ1	QBS Package Reference: TPS929240QDCPRQ1	QBS Package, Process, Product Reference: TPS4H000BQPWPRQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	3/0/0	3/0/0	3/0/0	3/0/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	1/77/0	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	-	3/231/0	-	3/231/0	3/231/0

TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	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
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	1/45/0	1/45/0	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	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	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	3/135/0	-	-
Test Group B - Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	-	-	1/77/0	1/77/0	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150C	408 Hours	-	3/231/0	-	-	-
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	1/30/0	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	3/90/0	3/90/0	1/30/0	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	3/30/0	3/30/0	1/10/0	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	-	1/3/0	1/3/0	1/3/0	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	1/3/0	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	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	3/90/0	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-2409-038

ZVEI ID: SEM-PA-01, SEM-PA-05, SEM-PA-07, SEM-PA-08, SEM-PA-11, SEM-PA-13, SEM-PA-18, 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 Change Management team or your local Field Sales Representative.

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI’s products are provided subject to TI’s Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI’s provision of these resources does not expand or otherwise alter TI’s applicable warranties or warranty disclaimers for TI products.