



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20251218003.2
Qualification of TI Philippines as an additional Assembly/Test site
for select devices
Change Notification / Sample Request

Date: December 18, 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

20251218003.2
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
DRV8305NQPHPRQ1	DRV8305NQPHPRQ1

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

PCN Number:	20251218003.2			PCN Date:	December 18, 2025
Title:	Qualification of TI Philippines as an additional Assembly/Test site for select devices				
Customer Contact:	Change Management team		Dept:	Quality Services	
Proposed 1st Ship Date:	June 16, 2026		Sample requests accepted until:	February 16, 2026*	
*Sample requests received after February 16, 2026 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 TI Philippines as an additional Assembly/Test site for select devices. No material differences between sites.					
		Current A/T site	Additional A/T site		
Assembly site		TITL	PHI		
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	
☒ No Change		☒ No Change		☒ No Change	
☐ Change		☐ Change		☐ Change	
Changes to product identification resulting from this PCN:					
Assembly Site Information:					
Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City		
TI Taiwan	TAI	TWN	Chung Ho, New Taipei City		
TI Philippines	PHI	PHL	Baguio city		
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)T0:1750



G4



(1P) SN74LS07NSR

(Q) 2000 (D) 0336

(31T) LOT: 3959047MLA

(4W) TKY (1T) 7523483SI2

(P)

(2P) REV: (V) 0033317

(20L) CS0: SHE (21L) CCO: USA

(22L) AS0: MLA (23L) ACO: MYS

Product Affected:

DRV8305GNQPHPRQ1

DRV8305NQPHPQ1

DRV8305NQPHPRQ1

Qualification Report

Automotive Qualification Summary

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

Approve Date 27-MARCH -2025

Product Attributes					
Attributes	Qual Device:	QBS Package Reference:	QBS Package Reference:	QBS Product Reference:	QBS Package, Process, Product Reference:
	DRV8305GNQPHPRQ1	S0809054C2PAPR	DRV3245AEPHPRQ1	DRV8305NQPHPRQ1	DRV8305NEPHPRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 0	Grade 1	Grade 0
Operating Temp Range (C)	-40 to 125	-40 to 150	-40 to 150	-40 to 125	-40 to 150
Product Function	Power Management	ASIC	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB	CFAB	RFAB	RFAB	RFAB
Assembly Site	PHI	PHI	PHI	PHI	TAI
Package Group	QFP	QFP	QFP	QFP	QFP
Package Designator	PHP	PAP	PHP	PHP	PHP
Pin Count	48	64	48	48	48

QBS: Qual By Similarity, also known as Generic Data
Qual Device DRV8305GNQPHPRQ1 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: DRV8305GNQPHPRQ1	QBS Package Reference: S0809054C2PAPR	QBS Package Reference: DRV3245AEPHPRQ1	QBS Product Reference: DRV8305NQPHPRQ1	QBS Package, Process, Product Reference: DRV8305NEPHPRQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	3/924/0	3/231/0	-	3/231/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	1/77/0	-	3/231/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	-	1/77/0	1/77/0	-	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/150C	1500 Cycles	-	-	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	-	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	-	1/5/0	-	-

PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	1/45/0	-	-	-
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/150C	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	2000 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	-	1/77/0	-	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150C	1000 Hours	-	-	1/77/0	-	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	3/90/0	3/90/0	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	3/90/0	3/90/0	1/30/0	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	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	1/3/0	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	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	1/3/0	1/6/0	1/6/0	1/3/0	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	1/30/0	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-NPD-2503-153

Automotive Q006 Qualification Summary
(As per AEC and JEDEC Guidelines)
Approve Date 27-MARCH -2025

Attributes	Qual Device: DRV8305GNQPHPRQ1	QBS Package Reference: S0809054C2PAPR	QBS Package Reference: DRV3245AEPHPRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 0
Operating Temp Range (C)	-40 to 125	-40 to 150	-40 to 150
Product Function	Power Management	ASIC	Power Management
Wafer Fab Supplier	RFAB	CFAB	RFAB
Assembly Site	PHI	PHI	PHI
Package Group	QFP	QFP	QFP
Package Designator	PHP	PAP	PHP
Pin Count	48	64	48

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: DRV8305GNQPHPRQ1	QBS Reference: S0809054C2PAPR	QBS Reference: DRV3245AEPHPRQ1
Test Group A - Accelerated Environment Stress Tests										
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	3/924/0	3/231/0
PC	A1.1	-	3	22	SAM Precon Pre	Review for delamination	-	-	3/66/0	3/66/0
PC	A1.2	-	3	22	SAM Precon Post	Review for delamination	-	-	3/66/0	3/66/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	-	3/3/0	-
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	-	3/9/0	-
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	-	3/9/0	-
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	-	3/9/0	-
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	-	3/231/0	-
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	-	3/66/0	-
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	-	3/3/0	-
HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	-	3/9/0	-

HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	-	3/9/0	-
HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	-	3/9/0	-
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/150C	1500 Cycles	-	-	3/231/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	-
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	-	3/66/0	-
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	-	3/3/0	-
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	-	3/9/0	-
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	-	3/9/0	-
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	-	3/9/0	-
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-55C/150C	3000 Cycles	-	-	3/231/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	-	3/231/0	-
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	-	3/66/0	3/66/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	-	3/3/0	3/3/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	-	3/9/0	3/9/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	-	3/9/0	3/9/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	-	3/9/0	3/9/0
PTC	A5.1	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	1/45/0	-
PTC	A5.2	JEDEC JESD22-A105	1	45	PTC	-40/125C	2000 Cycles	-	1/45/0	-
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	-
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	2000 Hours	-	-	-
HTSL	A6.1.1	-	3	1	Cross Section, post HTSL, 1X	Post stress cross section	Completed	-	3/3/0	-
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	2000 Hours	-	3/135/0	-
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	4000 Hours	-	-	-
HTSL	A6.2.1	-	3	1	Cross Section, post HTSL, 2X	Post stress cross section	Completed	-	3/3/0	-
Test Group C - Package Assembly Integrity Tests										

WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	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	3/90/0	3/90/0

QBS: Qual By Similarity, also known as Generic Data

Qual Device DRV8305GNQPHPRQ1 is qualified at MSL3 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

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-NPD-2503-153

Qualification Report

Automotive Qualification Summary

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

Approve Date 25-FEBRUARY -2025

Product Attributes

Attributes	Qual Device: DRV8305NQPHPRQ1	QBS Package Reference: S0809054C2PAPR	QBS Package Reference: DRV3245AEPHPRQ1	QBS Package, Process, Product Reference: DRV8305NEPHPQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 0	Grade 0
Operating Temp Range (C)	-40 to 125	-40 to 150	-40 to 150	-40 to 150
Product Function	Power Management	ASIC	Power Management	Power Management
Wafer Fab Supplier	RFAB	CFAB	RFAB	RFAB
Assembly Site	PHI	PHI	PHI	TAI
Package Group	QFP	QFP	QFP	QFP
Package Designator	PHP	PAP	PHP	PHP
Pin Count	48	64	48	48

QBS: Qual By Similarity, also known as Generic Data

Qual Device DRV8305NQPHPRQ1 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: DRV8305NQPHPRQ1	QBS Package Reference: S0809054C2PAPR	QBS Package Reference: DRV3245AEPHPRQ1	QBS Package, Process, Product Reference: DRV8305NEPHQP1
Test Group A - Accelerated Environment Stress Tests											
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	3/924/0	3/0/0	3/0/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	1/77/0	3/231/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	-	1/77/0	1/77/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/150C	1500 Cycles	-	-	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	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	-	1/5/0	-
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	1/45/0	-	-
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/150C	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	2000 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	-	1/77/0	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150C	1000 Hours	-	-	1/77/0	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	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
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
Test Group D - Die Fabrication Reliability Tests											
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Tddb	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements

SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests											
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	-	1/3/0	1/3/0	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	1/3/0
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

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-2408-112

Automotive Q006 Qualification Summary

(As per AEC and JEDEC Guidelines)

Approve Date 25-FEBRUARY -2025

Product Attributes

Attributes	Qual Device:	QBS Package Reference:	QBS Package Reference:	QBS Package, Process, Product Reference:
	DRV8305NQPHPRQ1	S0809054C2PAPR	DRV3245AEPHPRQ1	DRV8305NEPHPQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 0	Grade 0
Operating Temp Range (C)	-40 to 125	-40 to 150	-40 to 150	-40 to 150
Product Function	Power Management	ASIC	Power Management	Power Management
Wafer Fab Supplier	RFAB	CFAB	RFAB	RFAB
Assembly Site	PHI	PHI	PHI	TAI
Package Group	QFP	QFP	QFP	QFP
Package Designator	PHP	PAP	PHP	PHP
Pin Count	48	64	48	48

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: DRV8305NQPMPRQ1	QBS Reference: S0809054C2PAPR	QBS Reference: DRV3245AEPMPRQ1	QBS Reference: DRV8305NEPMPQ1
Test Group A - Accelerated Environment Stress Tests											
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	3/924/0	3/0/0	3/0/0
PC	A1.1	-	3	22	SAM Precon Pre	Review for delamination	-	-	3/66/0	3/66/0	3/66/0
PC	A1.2	-	3	22	SAM Precon Post	Review for delamination	-	-	3/66/0	3/66/0	3/66/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	3/231/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	-	3/3/0	-	3/3/0
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	-	3/9/0	-	3/9/0
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	-	3/9/0	-	3/9/0
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	-	3/9/0	-	3/9/0
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	-	3/231/0	-	3/231/0
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	-	3/66/0	-	3/66/0
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	-	3/3/0	-	3/3/0
HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	-	3/9/0	-	3/9/0
HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	-	3/9/0	-	3/9/0
HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	-	3/9/0	-	3/9/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/150C	1500 Cycles	-	-	3/231/0	3/231/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	-	-
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	-	3/66/0	-	-
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	-	3/3/0	-	-
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	-	3/9/0	-	-
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	-	3/9/0	-	-
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	-	3/9/0	-	-

TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-55C/150C	3000 Cycles	-	-	3/231/0	3/231/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	-	3/231/0	-	-
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	-	3/66/0	3/66/0	3/66/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	-	3/3/0	3/3/0	3/3/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	-	3/9/0	3/9/0	3/9/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	-	3/9/0	3/9/0	3/9/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	-	3/9/0	3/9/0	3/9/0
PTC	A5.1	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	1/45/0	-	-
PTC	A5.2	JEDEC JESD22-A105	1	45	PTC	-40/125C	2000 Cycles	-	1/45/0	-	-
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	-	-
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	2000 Hours	-	-	-	3/135/0
HTSL	A6.1.1	-	3	1	Cross Section, post HTSL, 1X	Post stress cross section	Completed	-	3/3/0	-	-
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	2000 Hours	-	3/135/0	-	-
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	4000 Hours	-	-	-	3/135/0
HTSL	A6.2.1	-	3	1	Cross Section, post HTSL, 2X	Post stress cross section	Completed	-	3/3/0	-	3/3/0
Test Group C - Package Assembly Integrity Tests											
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	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

QBS: Qual By Similarity, also known as Generic Data

Qual Device DRV8305NQPHPRQ1 is qualified at MSL3 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

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/>

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