



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20250725000.2

**Qualification of MIH08 as an additional Fab site option and
TI CDAT as an additional Assembly/Test site option for the Select Devices
Change Notification / Sample Request**

Date: July 28, 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.

Sincerely,

Change Management Team
SC Business Services

20250725000.2
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
ESD2CAN24DCKRQ1	NULL

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

PCN Number:	PCN# 20250725000.2		PCN Date:	July 28, 2025																			
Title:	Qualification of MIHO8 as an additional Fab site option and TI CDAT as an additional Assembly/Test site option for the Select Devices																						
Customer Contact:	Change Management Team		Dept:	Quality Services																			
Proposed 1st Ship Date:	January 24, 2026		Sample requests accepted until:	September 26, 2025*																			
*Sample requests received after September 26, 2025 will not be supported.																							
Change Type:																							
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material																		
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process																		
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input checked="" type="checkbox"/>	Wafer Fab Site																		
<input type="checkbox"/>	Mechanical Specification	<input checked="" type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Material																		
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Process																		
PCN Details																							
Description of Change:																							
Texas Instruments Incorporated is announcing the qualification of MIHO8 as an additional Fab site option & TI CDAT as an additional Assembly/Test site for the devices listed below.																							
<table border="1"> <thead> <tr> <th colspan="3">Current Fab Site</th> <th colspan="3">Additional Fab site</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Additional Fab site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>CFAB</td> <td>VDIODE</td> <td>200mm</td> <td>MIHO8</td> <td>VDIODE</td> <td>200mm</td> </tr> </tbody> </table>						Current Fab Site			Additional Fab site			Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter	CFAB	VDIODE	200mm	MIHO8	VDIODE	200mm
Current Fab Site			Additional Fab site																				
Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter																		
CFAB	VDIODE	200mm	MIHO8	VDIODE	200mm																		
Construction differences are as follows:																							
<table border="1"> <thead> <tr> <th></th> <th>Current site</th> <th>Additional site</th> </tr> </thead> <tbody> <tr> <td>Assembly/Test site</td> <td>TFME</td> <td>CDAT</td> </tr> <tr> <td>Mount Compound</td> <td>SID#A-09</td> <td>4229877</td> </tr> <tr> <td>Bond wire diam/material</td> <td>1.0mil Au</td> <td>1.0mil Cu</td> </tr> <tr> <td>Mold Compound</td> <td>SID#R-27</td> <td>4222198</td> </tr> <tr> <td>Lead finish</td> <td>NiPdAu</td> <td>Matte Sn</td> </tr> </tbody> </table>							Current site	Additional site	Assembly/Test site	TFME	CDAT	Mount Compound	SID#A-09	4229877	Bond wire diam/material	1.0mil Au	1.0mil Cu	Mold Compound	SID#R-27	4222198	Lead finish	NiPdAu	Matte Sn
	Current site	Additional site																					
Assembly/Test site	TFME	CDAT																					
Mount Compound	SID#A-09	4229877																					
Bond wire diam/material	1.0mil Au	1.0mil Cu																					
Mold Compound	SID#R-27	4222198																					
Lead finish	NiPdAu	Matte Sn																					
Upon expiry of this PCN, TI will combine lead finish solutions in a single standard part number. For example, a customer order for 7500 units of a specific TI part number with 2500 units SPQ (Standard Pack Quantity per reel) may be fulfilled in the following ways:																							
<ul style="list-style-type: none"> • 3 reels of NiPdAu finish • 3 reels of Matte Sn finish • 2 reels of Matte Sn and 1 reel of NiPdAu finish • 2 reels of NiPdAu and 1 reel of Matte Sn finish 																							
Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ																							
Qual details are provided in the Qual Data Section.																							
Reason for Change:																							
Supply continuity																							

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:

Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
CFAB	CU3	CHN	Chengdu
MIH08	MH8	JPN	Ibaraki

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TFME	NS2	THA	Bangpakong, Chachoengsao
CDAT	CDA	CHN	Chengdu

Assembly Site Information:

Sample product shipping label (not actual product label)

Product Affected:

ESD2CAN24DCKRQ1

Automotive New Product Qualification Summary (As per AEC-Q101 and JEDEC Guidelines)

Approve Date 23-FEBRUARY -2025

Product Attributes

Attributes	Qual Device:	
	<u>ESD2CAN24DBZRQ1</u>	<u>TSM24ADBZRQ1</u>
Automotive Grade Level	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125
Product Function	Interface	Interface
Wafer Fab Supplier	MH8	MH8
Assembly Site	PHI	PHI
Package Group	SOT	SOT
Package Designator	DBZ	DBZ
Pin Count	3	3

QBS: Qual By Similarity, also known as Generic Data
Qual Device ESD2CAN24DBZRQ1 is qualified at MSL1 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>ESD2CAN24DBZRQ1</u>	Qual Device: <u>TSM24ADBZRQ1</u>
Test Group A - Accelerated Environment Stress Tests									
PC	A1	JEDEC J-STD-020 JESD22-A113	-	0	Preconditioning	MSL1 260C	1 Step	2/0/0	1/0/0
HAST	A2	JEDEC JESD22- A110	3	77	Biased HAST	130C/85%RH	96 Hours	2/154/0	1/77/0
HAST	A2.1	JEDEC JESD22- A110	3	77	Biased HAST	130C/85%RH	96 Hours	2/154/0	1/77/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	2/2/0	1/1/0
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	2/6/0	1/3/0
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	2/6/0	1/3/0
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	2/6/0	1/3/0
HAST	A2.2	JEDEC JESD22- A110	3	70	Biased HAST	130C/85%RH	192 Hours	2/154/0	1/77/0
AC/UHAST	A3	JEDEC JESD22- A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	2/154/0	1/77/0
TCHT	A4.1	JEDEC JESD22- A104 and Appendix 6	3	77	Temperature Cycle	-65C/150C	1000 Cycles	2/154/0	1/77/0
TC	A4.1	JEDEC JESD22- A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	2/154/0	1/77/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	2/44/0	2/44/0

TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	1/1/0	1/1/0
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	1/3/0	1/3/0
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	2/6/0	1/3/0
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	2/6/0	1/3/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	2/154/0	1/77/0
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	2/44/0	1/22/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	1/1/0	1/1/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	2/6/0	1/3/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	2/6/0	1/3/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	2/6/0	1/3/0
Test Group B - Accelerated Lifetime Simulation Tests									
HTRB	B1.1	MIL-STD-750-1	3	77	High Temperature Reverse Bias	125C	1000 Hours	2/154/0	1/77/0
HTRB	B1.2	MIL-STD-750-1	3	77	High Temperature Reverse Bias	125C	2000 Hours	2/154/0	1/77/0
Test Group C - Package Assembly Integrity Tests									
DPA	C2	JESD22-B100	-	30	Physical Dimensions	Cpk>1.67	1 Step	2/60/0	1/30/0
WBP	C3	MIL-STD-750-2	-	10	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	1 Step	1/10/0	1/10/0
WBS	C4	AEC-Q101-003	-	10	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	1 Step	2/20/0	1/10/0
DS	C5	MIL-STD-750-2	-	5	Die Shear	MIL-STD-750-2 Method 2017	1 Step	2/10/0	1/5/0
RSH	C8	JESD22-B107	-	30	Solder Heat	260C, 10 seconds	1 Step	1/30/0	1/30/0
SD	C10	JEDEC J-STD-002	-	15	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	1 Step	1/10/0	1/10/0
SD	C10	JEDEC J-STD-002	-	15	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	1 Step	1/15/0	1/15/0
Test Group D - Die Fabrication Reliability Tests									
Test Group E - Electrical Verification Tests									
EV	E0	JESD22-B101	3	1000	Visual/Mechanical	Per JESD22 B-101	1 Step	1/1000/0	1/1000/0
ESD	E3	AEC Q101-001	3	10	ESD HBM	Room Temp	2000 Volts	1/10/0	1/10/0
ESD	E4	AEC Q101-005	3	10	ESD CDM	Room Temp	750 Volts	1/10/0	1/10/0

Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, HTSL, and IOL, as applicable

Passing results reflect shift analysis per Q101 requirements

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 : HTRB, 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-2405-014

Automotive New Product Qualification Summary
(As per AEC-Q101 and JEDEC Guidelines)
 Approve Date 23-FEBRUARY -2025

Product Attributes

Attributes	Qual Device:	
	<u>ESD2CAN24DBZRQ1</u>	<u>TSM24ADBZRQ1</u>
Automotive Grade Level	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125
Product Function	Interface	Interface
Wafer Fab Supplier	MH8	MH8
Assembly Site	PHI	PHI
Package Group	SOT	SOT
Package Designator	DBZ	DBZ
Pin Count	3	3

QBS: Qual By Similarity, also known as Generic Data
 Qual Device ESD2CAN24DBZRQ1 is qualified at MSL1 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>ESD2CAN24DBZRQ1</u>	Qual Device: <u>TSM24ADBZRQ1</u>
Test Group A - Accelerated Environment Stress Tests									
PC	A1	JEDEC J-STD-020 JESD22-A113	-	0	Preconditioning	MSL1 260C	1 Step	2/0/0	1/0/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	2/154/0	1/77/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	2/154/0	1/77/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	2/2/0	1/1/0
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	2/6/0	1/3/0
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	2/6/0	1/3/0
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	2/6/0	1/3/0
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	2/154/0	1/77/0
AC/UHAST	A3	JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	2/154/0	1/77/0
TCHT	A4.1	JEDEC JESD22-A104 and Appendix 6	3	77	Temperature Cycle	-65C/150C	1000 Cycles	2/154/0	1/77/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	2/154/0	1/77/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	2/44/0	2/44/0

TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	1/1/0	1/1/0
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	1/3/0	1/3/0
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	2/6/0	1/3/0
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	2/6/0	1/3/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	2/154/0	1/77/0
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	2/44/0	1/22/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	1/1/0	1/1/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	2/6/0	1/3/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	2/6/0	1/3/0
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Test Group B - Accelerated Lifetime Simulation Tests									
HTRB	B1.1	MIL-STD-750-1	3	77	High Temperature Reverse Bias	125C	1000 Hours	2/154/0	1/77/0
HTRB	B1.2	MIL-STD-750-1	3	77	High Temperature Reverse Bias	125C	2000 Hours	2/154/0	1/77/0
Test Group C - Package Assembly Integrity Tests									
DPA	C2	JESD22-B100	-	30	Physical Dimensions	Cpk>1.67	1 Step	2/60/0	1/30/0
WBP	C3	MIL-STD-750-2	-	10	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	1 Step	1/10/0	1/10/0
WBS	C4	AEC-Q101-003	-	10	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	1 Step	2/20/0	1/10/0
DS	C5	MIL-STD-750-2	-	5	Die Shear	MIL-STD-750-2 Method 2017	1 Step	2/10/0	1/5/0
RSH	C8	JESD22-B107	-	30	Solder Heat	260C, 10 seconds	1 Step	1/30/0	1/30/0
SD	C10	JEDEC J-STD-002	-	15	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	1 Step	1/10/0	1/10/0
SD	C10	JEDEC J-STD-002	-	15	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	1 Step	1/15/0	1/15/0
Test Group D - Die Fabrication Reliability Tests									
Test Group E - Electrical Verification Tests									
EV	E0	JESD22-B101	3	1000	Visual/Mechanical	Per JESD22 B-101	1 Step	1/1000/0	1/1000/0
ESD	E3	AEC Q101-001	3	10	ESD HBM	Room Temp	2000 Volts	1/10/0	1/10/0
ESD	E4	AEC Q101-005	3	10	ESD CDM	Room Temp	750 Volts	1/10/0	1/10/0

Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, HTSL, and IOL, as applicable

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E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

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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-2405-014

Automotive New Product Qualification Summary (As per AEC-Q101 and JEDEC Guidelines)

Approve Date 20-February-2025

Product Attributes

Attributes	Qual Device:	Qual Device:	QBS Reference:	QBS Reference:
	<u>ESD2CAN24DCKRQ1</u>	<u>ESD752DCKR</u>	<u>ESD2CAN24DCKRQ1</u>	<u>ESD2CANFD36DCKRQ1</u>
Automotive Grade Level	Grade 1	-	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Interface	-	Interface	Interface
Wafer Fab Supplier	CFAB	CFAB	CFAB	CFAB
Assembly Site	CDAT	CDAT	TFME	CDAT
Package Group	SOT	SOT	SOT	SOT
Package Designator	DCK	DCK	DCK	DCK
Pin Count	3	3	3	3

QBS: Qual By Similarity, also known as Generic Data
 Qual Device ESD2CAN24DCKRQ1 is qualified at MSL1 260C
 Qual Device ESD752DCKR is qualified at MSL1 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>ESD2CAN24DCKRQ1</u>	Qual Device: <u>ESD752DCKR</u>	QBS Reference: <u>ESD2CAN24DCKRQ1</u>	QBS Reference: <u>ESD2CANFD36DCKRQ1</u>
Test Group A - Accelerated Environment Stress Tests											
PC	A1	JEDEC J-STD-020 JESD22-A113	-	0	Preconditioning	MSL1 260C	1 Step	2/0/0	-	-	1/0
PC	A1	JEDEC J-STD-020 JESD22-A113	-	0	Preconditioning	MSL3 260C	1 Step	-	-	3/0/0	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	1/77/0	-	3/231/0	2/154
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	1/77/0	-	-	2/154
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	1/1/0	-	-	2/2
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	1/3/0	-	-	2/6
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	1/3/0	-	-	2/6
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	1/3/0	-	-	2/6
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	1/77/0	-	-	2/154
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	1/22/0	-	-	2/44
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	1/1/0	-	-	2/2
HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	1/3/0	-	-	2/6
HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	1/3/0	-	-	2/6

HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	1/3/0	-	-	2/6
AC/UHAST	A3	JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	2/154/0	-	3/231/0	1/77
TC	A4	JEDEC JESD22-A104 and Appendix 6	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	-
TC	A4.1	JEDEC JESD22-A104 and Appendix 6	3	77	Temperature Cycle	-65C/150C	1000 Cycles	-	-	3/231/0	-
TCHT	A4.1	JEDEC JESD22-A104 and Appendix 6	3	77	Temperature Cycle	-65C/150C	1000 Cycles	2/154/0	-	-	1/77
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	2/154/0	-	-	1/77
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	2/44/0	-	-	1/22
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	2/2/0	-	-	1/1
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	2/6/0	-	-	1/3
TC	A4.1.4	-	3	3	Bond Pull over Sitch, post TC, 1X	Post stress	-	2/6/0	-	-	1/3
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	2/6/0	-	-	1/3
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	2/154/0	-	-	1/77
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	2/44/0	-	-	1/22
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	2/2/0	-	-	1/1
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	2/6/0	-	-	1/3
TC	A4.2.4	-	3	3	Bond Pull over Sitch, post TC, 2X	Post stress	-	2/6/0	-	-	1/3
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	2/6/0	-	-	1/3
Test Group B - Accelerated Lifetime Simulation Tests											
Test Group C - Package Assembly Integrity Tests											
DPA	C1	AEC Q101-004	-	2	Destructive Physical Analysis	Per Q101-004	1 Step	-	-	1/2/0	-
DPA	C2	JESD22-B100	-	30	Physical Dimensions	Cpk>1.67	1 Step	1/30/0	-	1/30/0	1/30
WBP	C3	MIL-STD-750-2	-	10	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	1 Step	1/10/0	-	3/30/0	1/10
WBS	C4	AEC-Q101-003	-	10	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	1 Step	1/10/0	-	3/30/0	1/10
DS	C5	MIL-STD-750-2	-	5	Die Shear	MIL-STD-750-2 Method 2017	1 Step	1/5/0	-	3/15/0	1/5
RSH	C8	JESD22-B107	-	30	Solder Heat	260C, 10 seconds	1 Step	1/30/0	-	-	-

SD	C10	JEDEC J-STD-002	-	15	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	1 Step	-	-	1/150	-
SD	C10	JEDEC J-STD-002	-	15	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	1 Step	1/150	-	1/150	-
Test Group D - Die Fabrication Reliability Tests											
Test Group E - Electrical Verification Tests											
EV	E0	JESD22-B101	3	1000	Visual/Mechanical	Per JESD22 B-101	1 Step	3/3000/0	-	-	-
ESD	E3	AEC Q101-001	3	10	ESD HBM	Room Temp	2000 Volts	-	-	1/100	1/10
ESD	E4	AEC Q101-005	3	10	ESD CDM	Room Temp	250 Volts	-	-	1/100	-
ESD	E4	AEC Q101-005	3	10	ESD CDM	Room Temp	750 Volts	1/10/0	-	-	1/10

Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, HTSL, and IOL, as applicable

Passing results reflect shift analysis per Q101 requirements

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 : HTRB, 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-2402-039

**Automotive Qualification Summary
(As per AEC and JEDEC Guidelines)**

Q006 SOT at CDAT

Approve Date 24-FEBRUARY -2025

Product Attributes

Attributes	Qual Device: <u>ESD2CAN24DCKRQ1</u>	Qual Device: <u>ESD752DCKR</u>	QBS Process, Product Reference: <u>ESD2CAN24DCKRQ1</u>	QBS Package, Process, Product Reference: <u>ESD2CANED36DCKRQ1</u>
Automotive Grade Level	Grade 1	-	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Interface	-	Interface	Interface
Wafer Fab Supplier	CFAB	CFAB	CFAB	CFAB
Assembly Site	CDAT	CDAT	TFME	CDAT
Package Group	SOT	SOT	SOT	SOT
Package Designator	DCK	DCK	DCK	DCK
Pin Count	3	3	3	3

QBS: Qual By Similarity, also known as Generic Data

Qual Device ESD2CAN24DCKRQ1 is qualified at MSL1 260C

Qual Device ESD752DCKR is qualified at MSL1 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: ESD2CAN24DCKRQ1	Qual Device: ESD752DCKR	QBS Reference: ESD2CANED36DCKRQ1
Test Group A - Accelerated Environment Stress Tests										
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL1 260C	-	2/0/0	-	2/0/0
PC	A1.1	-	3	22	SAM Precon Pre	Review for delamination	-	2/44/0	-	2/44/0
PC	A1.2	-	3	22	SAM Precon Post	Review for delamination	-	2/44/0	-	2/44/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	1/77/0	-	2/154/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	1/1/0	-	2/2/0
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	1/3/0	-	2/6/0
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	1/3/0	-	2/6/0
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	1/3/0	-	2/6/0
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	1/77/0	-	2/154/0
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	1/22/0	-	2/44/0
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	1/1/0	-	2/2/0
HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	1/3/0	-	2/6/0
HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	1/3/0	-	2/6/0
HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	1/3/0	-	2/6/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	2/154/0	-	1/77/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	2/44/0	-	1/22/0
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	2/2/0	-	1/1/0
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	2/6/0	-	1/3/0
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	2/6/0	-	1/3/0
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	2/6/0	-	1/3/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	2/154/0	-	1/77/0
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	2/44/0	-	1/22/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	2/2/0	-	1/1/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	2/6/0	-	1/3/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	2/6/0	-	1/3/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	2/6/0	-	1/3/0

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-2402-039

ZVEI IDs: SEM-PW-13, SEM-PA-05, SEM-PA-07, SEM-PA-08, SEM-PA-11, SEM-PA-18, SEM-TF-01

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