TEXAS INSTRUMENTS **12500 TI Boulevard, MS 8640, Dallas, Texas 75243**

PCN# 20250220000.2
Add Cu as Alternative Wire Base Metal for Selected Device(s)
Change Notification / Sample Request

Date: February 20, 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

20250220000.2
Change Notification / Sample Request Attachments

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
ISOW7841AQDWEQ1	NULL
ISOW7841AQDWERQ1	NULL
ISOW7841FAQDWEQ1	NULL

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

PCN Number:	20250220000.2	**PCN Date:**	February 20, 2025

Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)

Customer Contact:	Change Management team	**Dept:**	Quality Services
Proposed 1st Ship Date:	August 19, 2025	**Estimated Sample Availability:**	April 21, 2025

***Sample requests received after** April 21, 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 new assembly material set to add Cu as an additional bond wire option for devices listed in “Product affected” section below. Devices will remain in current assembly facility and piece part changes as follows:

Material	Current	Proposed
Wire diam/type	0.96 mil Au	0.8mil Cu

Reason for Change:

Continuity of supply.

1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties
2) Maximize flexibility within our Assembly/Test production sites.
3) Cu is easier to obtain and stock

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:

None

Product Affected:

ISOW7841AQDWEQ1	ISOW7841AQDWERQ1
ISOW7841FAQDWEQ1	ISOW7841FAQDWERQ1

Qualification Report
Automotive New Product Qualification Summary

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

Approve Date 20-December-2024

Product Attributes

Attributes	Qual Device: ISOW7841FQDWEQ1	QBS Process, Product Reference: ISOW7841QDWEQ1	QBS Process Reference: ISO5851QDWQ1	QBS Package Reference: AMC131M03QDFMRQ1	QBS Package Reference: AMC3311QDWERQ1
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	Interface	Signal Chain	Signal Chain
Wafer Fab Supplier	DP1DM5, DP1DM5	DP1DM5, DP1DM5	MH8, DP1DM5, DP1DM5	DMOS6, MH8, MH8	MH8, AIZU, AIZU, MH8
Assembly Site	TAI	TAI	TAI	TAI	TAI
Package Group	SOIC	SOIC	SOIC	SOIC	SOIC
Package Designator	DWE	DWE	DW	DFM	DWE
Pin Count	16	16	16	20	16

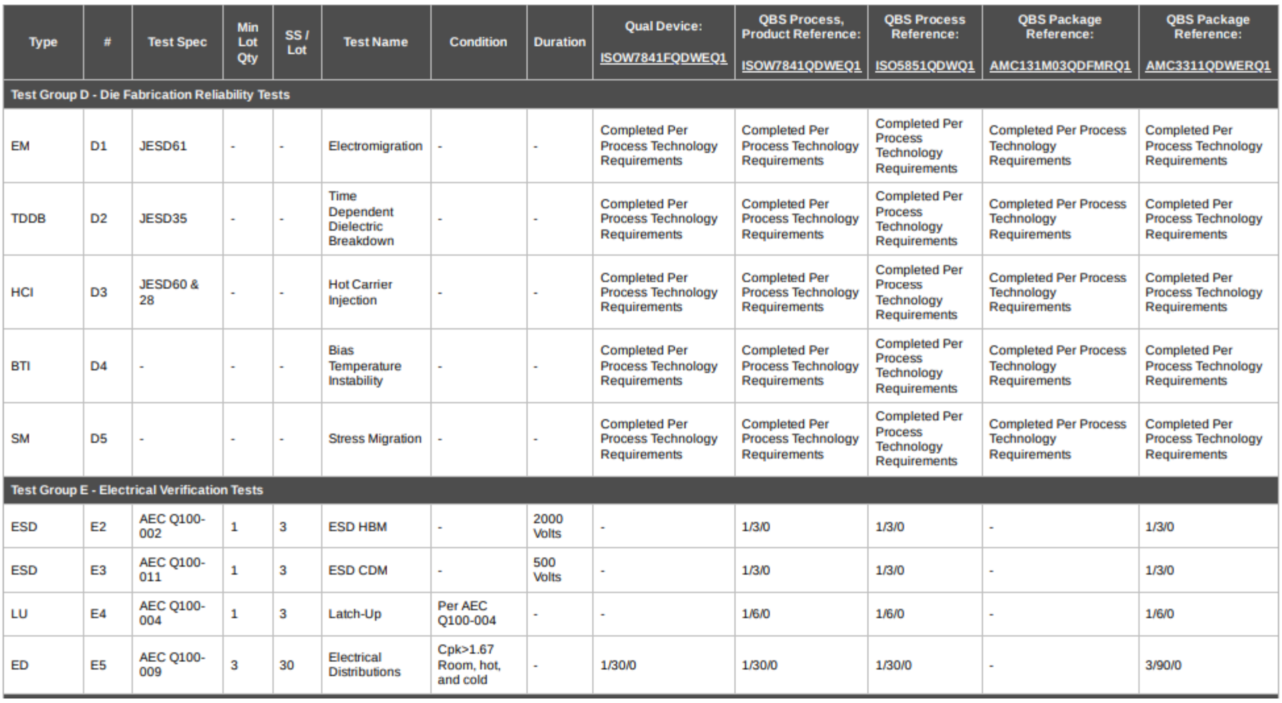
QBS: Qual By Similarity, also known as Generic Data

Qual Device ISOW7841FQDWEQ1 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: ISOW7841FQDWEQ1	QBS Process, Product Reference: ISOW7841QDWEQ1	QBS Process Reference: ISO5851QDWQ1	QBS Package Reference: AMC131M03QDFMRQ1	QBS Package Reference: AMC3311QDWERQ1
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	-	-	No Fails	No Fails
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	110C/85%RH	264 Hours	-	-	-	3/231/0	1/77/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	110C/85%RH	264 Hours	-	-	-	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
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	-	-	1/5/0	1/5/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175C	500 Hours	-	-	-	3/135/0	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	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
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	-	-	-	-	-	3/30/0



Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: ISOW7841FQDWEQ1	QBS Process, Product Reference: ISOW7841QDWEQ1	QBS Process Reference: ISO5851QDWQ1	QBS Package Reference: AMC131M03QDFMRQ1	QBS Package Reference: AMC3311QDWERQ1
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	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/

Automotive Qualification Summary

(As per AEC-Q100, AEC-Q006, and JEDEC Guidelines)
Approve Date 07-September-2023

Product Attributes

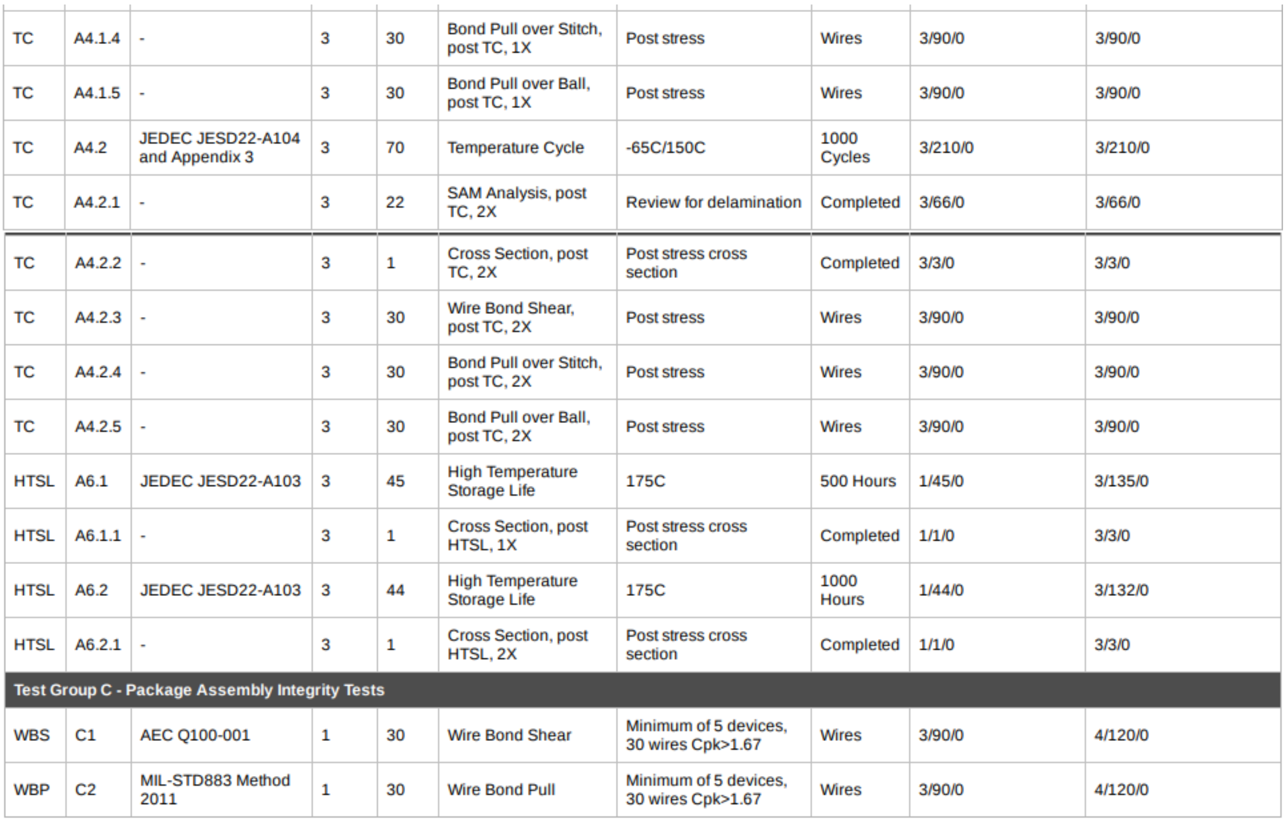
Attributes	Qual Device: AMC3311QDWERQ1	QBS Package, Process, Product Reference: AMC131M03QDFMRQ1
Automotive Grade Level	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125
Product Function	Signal Chain	Signal Chain
Wafer Fab Supplier	MH8, AIZU, AIZU, MH8	DMOS6, MH8, MH8
Assembly Site	TAI	TAI
Package Group	SOIC	SOIC
Package Designator	DWE	DFM
Pin Count	16	20

QBS: Qual By Similarity
Qual Device AMC3311QDWERQ1 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: AMC3311QDWERQ1	QBS Reference: AMC131M03QDFMRQ1
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
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	110C/85%RH	264 Hours	1/77/0	3/231/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	1/1/0	3/3/0
HAST	A2.1.3	-	3	30	Wire Bond Shear, post bHAST, 1X	Post stress	Wires	1/30/0	3/90/0
HAST	A2.1.4	-	3	30	Bond Pull over Stitch, post bHAST, 1X	Post stress	Wires	1/30/0	3/90/0
HAST	A2.1.5	-	3	30	Bond Pull over Ball, post bHAST, 1X	Post stress	Wires	1/30/0	3/90/0
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	110C/85%RH	528 Hours	1/70/0	3/210/0
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	1/22/0	3/66/0
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	1/1/0	3/3/0
HAST	A2.2.3	-	3	30	Wire Bond Shear, post bHAST, 2X	Post stress	Wires	1/30/0	3/90/0
HAST	A2.2.4	-	3	30	Bond Pull over Stitch, post bHAST, 2X	Post stress	Wires	1/30/0	3/90/0
HAST	A2.2.5	-	3	30	Bond Pull over Ball, post bHAST, 2X	Post stress	Wires	1/30/0	3/90/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	3/231/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	3/66/0	3/66/0
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	3/3/0	3/3/0
TC	A4.1.3	-	3	30	Wire Bond Shear, post TC, 1X	Post stress	Wires	3/90/0	3/90/0



TC	A4.1.4	-	3	30	Bond Pull over Stitch, post TC, 1X	Post stress	Wires	3/90/0	3/90/0
TC	A4.1.5	-	3	30	Bond Pull over Ball, post TC, 1X	Post stress	Wires	3/90/0	3/90/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	3/210/0	3/210/0
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	30	Wire Bond Shear, post TC, 2X	Post stress	Wires	3/90/0	3/90/0
TC	A4.2.4	-	3	30	Bond Pull over Stitch, post TC, 2X	Post stress	Wires	3/90/0	3/90/0
TC	A4.2.5	-	3	30	Bond Pull over Ball, post TC, 2X	Post stress	Wires	3/90/0	3/90/0
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	175C	500 Hours	1/45/0	3/135/0
HTSL	A6.1.1	-	3	1	Cross Section, post HTSL, 1X	Post stress cross section	Completed	1/1/0	3/3/0
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	175C	1000 Hours	1/44/0	3/132/0
HTSL	A6.2.1	-	3	1	Cross Section, post HTSL, 2X	Post stress cross section	Completed	1/1/0	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	3/90/0	4/120/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	3/90/0	4/120/0

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

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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/

ZVEI ID: SEM-PA-08

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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