

PCN Number:	20231109003.1		PCN Date:	November 09, 2023	
Title:	Qualification of MIHO8 as an additional Fab site option for select LB8LV devices				
Customer Contact:	Change Management team		Dept:	Quality Services	
Proposed 1st Ship Date:	Feb 9, 2024		Sample requests accepted until:	Dec 9, 2023*	
*Sample requests received after December 9, 2023 will not be supported.					
Change Type:					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input checked="" type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Material
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
Texas Instruments is pleased to announce the qualification of MIHO8 as an additional fab site for selected devices as listed below in the product affected section.					
Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
DMOS5	LBC8LV	200 mm	MIHO8	LBC8LV	200 mm
Qual details are provided in the Qual Data Section.					
Reason for Change:					
Continuity of Supply					
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):					
None					
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		
DMOS5	DM5	USA	Dallas		
MIHO8	MH8	JPN	Ibaraki		
Sample product shipping label (not actual product label)					
Product Affected:					
UCC21520DWR					

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

Type	#	Test Spec	Min Lot Qty	SSLot	Test Name / Condition	Duration	Qual Device: UCC21320QDWKRQ1	QBS Product Reference: UCC21520AQDWRQ	QBS Product Reference: UCC21520QDWRQ1	QBS Process Reference: ISO7741FQDWRQ1
Test Group A – Accelerated Environment Stress Tests										
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	-
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	-	1/77/0	3/231/0	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, - 65/150C	500 Cycles	-	1/77/0	3/231/1 ^{Non1}	-
TC-BP	A4	MIL-STD883 Method 2011	1	30	Post Temp Cycle Bond Pull	Wires	-	1/30/0	3/90/0	-
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	-	1/45/0	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	-	1/45/0	1/45/0	-
Test Group B – Accelerated Lifetime Simulation Tests										
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	1/77/1 ^{Non2}	3/231/1 ^{Non1}	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 (Cpk>1.67)	Wires	-	1/30/0	3/90/0	3/90/0
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	-	1/30/0	3/90/0	3/90/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	-	-	-	-	1/15/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	-	-	-	1/30/0
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 Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Type	#	Test Spec	Min Lot Qty	SSLot	Test Name / Condition	Duration	Qual Device: UCC21320QDWKRQ1	QBS Product Reference: UCC21520AQDWRQ	QBS Product Reference: UCC21520QDWRQ1	QBS Process Reference: ISO7741FQDWRQ1
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	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										
HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	4000 V	-	1/3/0	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1500 V	1/3/0	1/3/0	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Auto Latch-up	Ta(max)	-	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67	1/30/0	3/90/0	3/90/0	3/90/0

- QBS: Qual By Similarity
- Qual Device UCC21320QDWKRQ1 is qualified at LEVEL3-280C
- Device UCC21320QDWKRQ1 contains multiple dies

A1 (PC): Preconditioning:
Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:
Grade 0 (or E): -40°C to +150°C
Grade 1 (or Q): -40°C to +125°C
Grade 2 (or T): -40°C to +105°C
Grade 3 (or I): -40°C to +85°C

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

Green/Pb-free Status:
Qualified Pb-Free (SMT) and Green

NOTES:

- 1 unit failed AC and 1 unit failed HTOL due to an electrical over stress event. Contact TI Quality group for full 8D report.
- 1 unit failed HTOL due handling. Contact TI Quality group for full 8D report.

TI Qualification ID: 20191119-132181

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

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