12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20180628002.2
Qualification of MIHO8 as an additional Fab site option for select ABCD5HV devices
Change Notification / Sample Request
Reissue: Proposed 1st Ship Date correction

Date: July 03, 2018
To: PREMIER FARNELL PCN

Dear Customer:

This is an announcement of 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 30 days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. The proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

If samples or additional data are required, requests must be received within 30 days of acknowledgement as samples are not built ahead of the change. You may contact the PCN Manager or your local Field Sales Representative to acknowledge this PCN and request samples or additional data.

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, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

20180628002.2
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TCAN1042HGVDRQ1	null
TCAN1051GVDRQ1	null
TCAN1051HVDRQ1	null
TCAN1051VDRQ1	null

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

PCN Number:	20180628002.2	**PCN Date:**	July 3, 2018
Title:	Qualification of MIHO8 as an additional Fab site option for select ABCD5HV devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	January 3, 2019	**Estimated Sample Availability:**	Date provided at sample request.

Change Type:

☐	Assembly Site	☐	Assembly Process	☐	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☒	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process
		☐	Part number change		

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of its MIHO8 fabrication facility as an additional Wafer Fab source for the selected devices listed in the "Product Affected" section.

Current Fab Site			Additional Fab Site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab Site**	**Process**	**Wafer Diameter**
MAINEFAB	ABCD5HV	200 mm	MIHO8	ABCD5HV	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:

Current:

Current Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
MAINEFAB	CUA	USA	South Portland

New Fab Site:

New Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
MIHO8	**MH8**	**JPN**	**Ibaraki**

Sample product shipping label (not actual product label)

Product Affected:

TCAN1042DQ1	TCAN1042HGDQ1	TCAN1051DQ1	TCAN1051HGDQ1
TCAN1042DRQ1	TCAN1042HGDRQ1	TCAN1051DRQ1	TCAN1051HGDRQ1
TCAN1042GDQ1	TCAN1042HGVDQ1	TCAN1051GDQ1	TCAN1051HGVDQ1
TCAN1042GDRQ1	TCAN1042HGVDRQ1	TCAN1051GDRQ1	TCAN1051HGVDRQ1

TCAN1042GVDQ1	TCAN1042HVDQ1	TCAN1051GVDQ1	TCAN1051HVDQ1
TCAN1042GVDRQ1	TCAN1042HVDRQ1	TCAN1051GVDRQ1	TCAN1051HVDRQ1
TCAN1042HDQ1	TCAN1042VDQ1	TCAN1051HDQ1	TCAN1051VDQ1
TCAN1042HDRQ1	TCAN1042VDRQ1	TCAN1051HDRQ1	TCAN1051VDRQ1

Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)

TCAN1042HVDRQ1, TCAN1051VDRQ1 and ABCD05HV in Miho8
(Q100H, Grade 1, -40/125C)
Approved 23-Jun-2018

Product Attributes

Attributes	Qual Device: TCAN1042HVDRQ1	Qual Device: TCAN1051VDRQ1
Automotive Grade Level	Grade 1	Grade 1
Operating Temp Range	-40 to +125 C	-40 to +125 C
Product Function	Interface	Interface
Wafer Fab Supplier	MIHO8	MIHO8
Die Revision	B	A1
Assembly Site	FMX	FMX
Package Type	SOIC	SOIC
Package Designator	D	D
Ball/Lead Count	8	8

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: TCAN1042HVDRQ1	Qual Device: TCAN1051VDRQ1
	Test Group A – Accelerated Environment Stress Tests								
	PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 1-260C	No Fails	No Fails
	HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	2/154/0	1/77/0
	AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	2/154/0	1/77/0
	TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	2/154/0	1/77/0
	TC-WBP	A4	MIL-STD883 Method 2011	1	30	Bond Pull, Post T/C, 500 Cycles	Wires	1/30/0 (1)	1/30/0 (1)
	PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A	N/A
	HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	500 Hours	1/45/0	1/45/0

	Test Group B – Accelerated Lifetime Simulation Tests								
	HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 150C	300 Hours	2/154/1 (2)	1/77/0
	ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	2/1600/0	1/800/0
	EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A
	Test Group C – Package Assembly Integrity Tests								
	WBS	C1	AEC Q100-001	1	30	Wire Bond Shear Cpk>1.67	Wires	1/30/0	1/30/0
	WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull Cpk>1.67	Wires	1/30/0	1/30/0
	SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	-	N/A	N/A
	PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	N/A	N/A
	Test Group D – Die Fabrication Reliability Tests								
	EM	D1	JESD61	-	-	Electromigration	-	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
	HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	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
	SM	D5	-	-	-	Stress Migration	-	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	6000 V	1/3/0	1/3/0
	HBM	E2	AEC Q100-002	1	3	ESD - HBM (Bus Pins Only)	16000 V	1/6/0	1/3/0
	CDM	E3	AEC Q100-011	1	3	ESD - CDM	1500 V	1/6/0	1/3/0
	LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0	1/6/0
	ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67	3/90/0	3/90/0

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

THIS INFORMATION RELATING TO QUALITY AND RELIABILITY IS PROVIDED "AS IS." Product information detailed in this report may not accurately reflect TI's current product materials, processes and testing used in the construction of the TI products. Customers are solely responsible to conduct sufficient engineering and additional qualification testing to determine whether a device is suitable for use in their applications. Using TI products outside limits stated in TI's datasheet may void TI's warranty. See TI's Terms of Sale at "http://www.ti.com/lsds/ti/legal/termsofsale.page"

Notes/ Comments:
1).Pulled from 5 units
2.) EOS. QEM-EVAL-1801-00348. Discounted

For questions regarding this notice, e-mails can be sent to the regional contacts shown below, or you can contact your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com