



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20200218000.2B
Qualify TI Chengdu as an additional Assembly site for select devices
Change Notification / Sample Request

Date: September 01, 2020
To: Digi-Key PCN

Dear Customer:

Revision B is to update the Wetable flank design for TI Chengdu in the description of change section.

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. 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.

The changes discussed within this PCN will not take effect until TI receives written customer approval. In order to assure continuity of supply, customer approval is requested no later than 1 month prior to the proposed 1st ship date indicated on the following pages.

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 Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your field sales representative.

Sincerely,

PCN Team
SC Business Services

20200218000B
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
DRV8702DQRHBRQ1	null
DRV8702DQRHBTQ1	null
DRV8702QRHBRQ1	null
DRV8702QRHBTQ1	null
DRV8703DQRHBTQ1	null
DRV8703QRHBRQ1	null
DRV8703QRHBTQ1	null
DRV8703DQRHBRQ1	null

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

PCN Number:	20200218000.2B	PCN Date:	Sept. 1, 2020
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Title: Qualify TI Chengdu as an additional Assembly site for select devices

Customer Contact: [PCN Manager](#) **Dept:** Quality Services

Change Type:			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input checked="" type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process

PCN Details

Description of Change:

Revision B is to update the Wettable flank design for TI Chengdu (Section A-A: Minimum dimple height from 130um to 100 um).

Texas Instruments is pleased to announce the qualification of TI Chengdu as additional Assembly Site for Select Devices listed in the "Product Affected" Section. Material differences are as follows.

Material Differences:

	UTAC	TI Chengdu
Mount compound	Ablebond 8600	CRM-1076NS
Leadframe finish	Matte Sn	NiPdAu

Package Outline Drawing Differences:

	UTAC	TI Chengdu
Package Drawing		
Wettable Flank design	Step Cut	Dimple
Package lead length, mm	0.3min/0.5 max	0.32min/0.52 max

Reason for Change:

Continuity of Supply

Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI Eco-Info website . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.
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Changes to product identification resulting from this PCN:

Assembly Site		
UTAC Thai Limited	Assembly Site Origin (22L)	ASO: NSE
TI Chengdu	Assembly Site Origin (22L)	ASO: CDA

Sample product shipping label (not actual product label)

ECAT: G4 = NiPdAu
ECAT: G3 = Matte

Product Affected

See page 2

Qualification Report

Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)
Approve Date 12-Feb-2020

Product Attributes

Attributes	Qual Device: <u>DRV8702QRHBRQ1</u>	Qual Device: <u>DRV8703QRHBRQ1</u>
Operating Temp Range	-40 to +125 C	-40 to +125 C
Automotive Grade Level	Grade 1	Grade 1
Product Function	Power Management	Power Management
Die Attributes	-	-
Wafer Fab Supplier	RFAB	RFAB
Wafer Diameter (mm)	300	300
Wafer Process Technology	LBC8	LBC8
Wafer Process ID	LBC8	LBC8
Die Revision	A	A
Die Size (L,W) (mm)	2.05 X 2.21	2.05 X 2.21
Die Size (H) (mils)	10.5	10.5
Die Gate Length (nm)	-	-
Number of Metal Layers	3	3
Metal Composition	-	-
Die Passivation Material and Thickness	-	-
Final Polyimide	-	-

Attributes	Qual Device: <u>DRV8702QRHBRQ1</u>	Qual Device: <u>DRV8703QRHBRQ1</u>
Backgrind	Mechanical	Mechanical
Die Separation Method	-	-
Package Attributes	-	-
Assembly Site	CDAT	CDAT
Package Type	RHB	RHB
Package Designator	RHB	RHB
Ball/Lead Count	32	32
Package Size (mils)	196.85 X 196.85	196.85 X 196.85
Body Thickness (mils)	35.43	35.43
Ball/Lead Pitch (mils)	19.68	19.68
Die Attach Supplier Name	SUMITOMO	SUMITOMO
Die Attach Supplier Number	CRM-1076NS	CRM-1076NS
Die Attach Material ID	4207123-0002	4207123-0002
Die Attach Method	Epoxy Dispense	Epoxy Dispense
Mold Compound Supplier Name	SUMITOMO	SUMITOMO
Mold Compound Supplier Number	EME-G700LTD-S	EME-G700LTD-S
Mold Compound ID	4222198-0023	4222198-0023
Flammability Rating	UL 94 V-0	UL 94 V-0
Wire Bond Material	PCC	PCC
Wire Bond Diameter (mils)	1.3	1.3
Type of Wire Bond	-	-
Lead Frame Pad Size (mils)	-	-
Lead Frame Material	Cu	Cu
Leadframe Plating Composition	NiPdAu	NiPdAu

- QBS: Qual By Similarity

- Qual Device DRV8703QRHBRQ1 is qualified at LEVEL2-260C

- Qual Device DRV8702QRHBRQ1 is qualified at LEVEL2-260C

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>DRV8702QRHBRQ1</u>	Qual Device: <u>DRV8703QRHBRQ1</u>
Test Group A – Accelerated Environment Stress Tests								
PC	A1	-	3	22	SAM Analysis, Pre Stress	Completed	-	3/66/0
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 2-260C	-	No fails
PC	A1	-	3	22	SAM Analysis, Post Stress	Completed	-	3/66/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	-	3/240/0
HAST	A2	-	3	1	Cross Section, Post bHAST 96 Hours	Completed	-	3/3/0
HAST	A2	-	3	30	Wire Bond Shear, Post bHast, 96 Hours	Wires	-	3/90/0
HAST	A2	-	3	30	Bond Pull over Stitch, post bHAST, 96	Wires	-	3/90/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: <u>DRV8702QRHBRQ1</u>	Qual Device: <u>DRV8703QRHBRQ1</u>
					Hours			
HAST	A2	-	3	30	Bond Pull over Ball, Post bHAST, 96 Hours	Wires	-	3/90/0
HAST	A2	JEDEC JESD22-A110	3	70	Biased HAST, 130C/85%RH	192 Hours	-	3/210/0
HAST	A2	-	3	1	Cross Section, Post bHAST 192 Hours	Completed	-	3/3/0
HAST	A2	-	3	22	SAM Analysis, Post bHAST, 192 Hours	Completed	-	3/66/0
HAST	A2	-	3	30	Wire Bond Shear, Post bHast, 192 Hours	Wires	-	3/90/0
HAST	A2	-	3	30	Bond Pull over Stitch, post bHAST, 192 Hours	Wires	-	3/90/0
HAST	A2	-	3	30	Bond Pull over Ball, Post bHAST, 192 Hours	Wires	-	3/90/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, - 65/150C	500 Cycles	-	3/298/0
TC	A4	-	3	1	Cross Section, Post T/C 500 Cycles	Completed	-	3/3/0
TC	A4	-	3	22	SAM Analysis, Post T/C, 500 Cycles	Completed	-	3/66/0
TC	A4	-	3	30	Wire Bond Shear, Post T/C 500 Cycles	Wires	-	3/90/0
TC	A4	-	3	30	Bond Pull over Stitch Post T/C 500 Cycles	Wires	-	3/90/0
TC	A4	-	3	30	Bond Pull over Ball Post T/C 500 Cycles	Wires	-	3/90/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle, - 65/150C	1000 Cycles	-	3/230/1*
TC	A4	-	3	1	Cross Section, Post T/C 1000 Cycles	Completed	-	3/3/0
TC	A4	-	3	22	SAM Analysis, Post T/C, 1000 Cycles	Completed	-	3/66/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: <u>DRV8702QRHBRQ1</u>	Qual Device: <u>DRV8703QRHBRQ1</u>
TC	A4	-	3	30	Wire Bond Shear, Post T/C 1000 Cycles	Wires	-	3/90/0
TC	A4	-	3	30	Bond Pull over Stitch, Post T/C, 1000 Cycles	Wires	-	3/90/0
TC	A4	-	3	30	Bond Pull over Ball, Post T/C, 1000 Cycles	Wires	-	3/90/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle -40/125C	1000 Cycles	-	-
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle -40/125C	2000 Cycles	-	-
HTSL	A6	JEDEC JESD22-A103	3	45	High Temp Storage Bake 150C	1000 Hours	-	3/138/0
HTSL	A6	-	3	1	Cross Section, Post HTSL 1000 Hours	Completed	-	3/3/0
HTSL	A6	JEDEC JESD22-A103	3	44	High Temp Storage Bake 150C	2000 Hours	-	3/135/0
HTSL	A6	-	3	1	Cross Section, Post HTSL 2000 Hours	Completed	-	3/3/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.

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

*: 1 TC fail due to EOS not related to TC, 8D available.

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN_ww_admin_team@list.ti.com

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