12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20190926004.1A
Qualify New Assembly Material set for Selected Device(s)
Change Notification / Sample Request

Date: November 15, 2019
To: PREMIER FARNELL PCN

Dear Customer:

The purpose of this version A is to retract devices from this change notification. The retraction is for select devices that were inadvertently included and are not affected by this change. We apologize for any inconvenience this may have caused.

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.

We request you acknowledge 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. If you require samples or additional data to support your evaluation, please request within 30 days.

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.

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

20190926004.1A
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, 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
RM48L952PGET	null

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

PCN Number:	20190926004.1A	**PCN Date:**	Nov 15, 2019
Title:	Qualify New Assembly Material set for Selected Device(s)		
Customer Contact:	PCN Manager	**Dept:**	Quality Services

Change Type:

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

PCN Details

Description of Change:

Revision A is to remove select devices in the Product Affected Section (with ~~strikethrough~~) and highlighted in yellow. These devices were inadvertently added and not affected by this change.

Texas Instruments is pleased to announce the qualification of new assembly material for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:

Material	Current	Proposed
Mount compound	4207768	4208458

Reason for Change:

Continuity of supply

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

None

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	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 at the site link below http://www.ti.com/quality/docs/materialcontentsearch.tsp

Changes to product identification resulting from this PCN:

None

Product Affected:

RM41L232BPZT	RM46L440CPGET	RM46L852CPGET	RM48L950DPGET
RM42L432BPZT	RM46L450CPGET	RM46L852PGET	RM48L952DPGET
RM42L432PZT	RM46L830CPGET	RM48L530DPGET	~~RM48L952PGET~~
RM46L430CPGET	RM46L840CPGET	~~RM48L530PGET~~	
RM46L430PGET	RM46L850CPGET	RM48L540DPGET	

Qualification Report

Approve Date 06-Sept-2019

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: 5700432APZQQ1R	Qual Device: LS10206AGPGEQR	Qual Device: S5703137CPGEQQ	QBS Device: LS10206AGPGEQR	QBS Package Reference: F280049PZQ
Test Group A – Accelerated Environment Stress Tests											
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 3-260C	-	-	-	3/693/0	1/190/0
THB	A2	JEDEC JESD22-A101	3	77	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	-	-	-	3/231/0	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	-	-	-	3/231/0	1/77/0
UHAST	A3	JEDEC JESD22-A102	3	77	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	-	
UHAST	A3	JEDEC JESD22-A102	3	77	Unbiased HAST 110C/85%RH	264 Hours	-	-	-	-	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	-	-	-	3/231/0	1/77/0
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Bond Pull Post Temp Cycle	Wires	-	-	-	1/60/0	
PTC	A5	JEDEC JESD2	1	45	Power Temperatur	1000 Cycle	N/A	N/A	N/A	N/A	N/A

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: 5700432APZQQ1R	Qual Device: LS10206AGPGEQR	Qual Device: S5703137CPGEQQ	QBS Device: LS10206AGPGEQR	QBS Package Reference: F280049PZQ
		2-A105			e Cycle	s					
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 hours	-	-	-	3/231/0	-
Test Group B – Accelerated Lifetime Simulation Tests											
HTOL	B1	JEDEC JESD22-A108	3	77	HTOL 125C	1000 Hours	-	-	-	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	-
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A	N/A	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	3/90/0	3/90/0	3/90/0	1/30/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	Wires	3/90/0	3/90/0	3/90/0	1/30/0	1/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	-	-	-	-	-	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	-	-	-	-	-
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	-	-	-	-	-	-
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 Dependant 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

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: 5700432APZQQ1R	Qual Device: LS10206AGPGEQR	Qual Device: S5703137CPGEQQ	QBS Device: LS10206AGPGEQR	QBS Package Reference: F280049PZQ
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	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	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

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	QBS Package Reference: F280040PMQR	QBS Package Reference: 771538PTPACT	QBS Package Reference: TMS320F28377DPTPQ (DM6, UMC)
Test Group A – Accelerated Environment Stress Tests									
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 3-260C	3/1020/0	3/894/0	6/1386/0
THB	A2	JEDEC JESD22-A101	3	77	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	3/231/0	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	-	-	6/462/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	3/231/0	-	-
UHAST	A3	JEDEC JESD22-A102	3	77	Unbiased HAST 130C/85%RH	96 Hours		3/231/0	6/462/0
UHAST	A3	JEDEC JESD22-A102	3	77	Unbiased HAST 110C/85%RH	264 Hours		3/228/0	
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	6/462/0
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Bond Pull Post Temp Cycle	Wires	1/60/0		
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A	N/A	N/A
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 hours	3/231/0	3/231/0	6/462/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	QBS Package Reference: F280040PMQR	QBS Package Reference: 771538PTPACT	QBS Package Reference: TMS320F28377DPTPQ (DM6, UMC)
Test Group B – Accelerated Lifetime Simulation Tests									
HTOL	B1	JEDEC JESD22-A108	3	77	HTOL 125C	1000 Hours	1/77/0	-	6/462/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	6/4800/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A	6/462/0
Test Group C – Package Assembly Integrity Tests									
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	Wires	1/30/0	1/30/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	Wires	1/30/0	1/30/0	1/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	-	-	-	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	-	-	-
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	-	-	-	-
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
TDDB	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	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	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
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements

- QBS: Qual By Similarity
- Qual Devices 5700432APZQQ1R, LS10206AGPGEQR and S5703137CPGEQQ are qualified at LEVEL3-260CG

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

Note: Generic data (QBS) is being used to convert the 8200TI Die attach devices to FS849 die attach devices. This die attach has been qualified and in production in LQFP/HLQFP Automotive devices for the same packages, die sizes and die technologies thus justify using QBS package data.

For questions regarding this notice, e-mails can be sent to the regional 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
Japan	PCNJapanContact@list.ti.com

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