PCN Number:	20151201000	**PCN Date:**	12/11/2015
Title:	TPS1H100BQPWPRQ1 metal rerouting		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	6/11/2016	**Estimated Sample Availability:**	Date provided at sample request

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:

Texas Instruments Incorporated is announcing the qualification of TPS1H100BQPWPRQ1 metal level only spin to synchronize the logic of charge pump and driver stage.

Reason for Change:

Improve fault-tolerant ability.

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

None.

Changes to product identification resulting from this PCN:

None.

Product Affected:

TPS1H100AIPWPR, TPS1H100AQPWPRQ1, TPS1H100BQPWPRQ1

Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)
TPS1H100BQPWPRQ1 and TPS1H100AQPWPRQ1 (PG1.2)
Approved 23-Nov-2015

Product Attributes

Attributes	Qual Device: TPS1H100AQ PWPRQ1	Qual Device: TPS1H100B QPWPRQ1	QBS Product Reference: TPS1H100AQ PWPRQ1	QBS Product Reference: TPS1H100BQ PWPRQ1	QBS Product Reference: TPS1H100BQ PWPRQ1	QBS Process and package References: TPS92630
Assembly Site	TAIWAN	TAIWAN	TAIWAN	TAIWAN	TAIWAN	TAIWAN
Package Family	HTSSOP	HTSSOP	HTSSOP	HTSSOP	HTSSOP	HTSSOP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DM0S5	DM0S5	DM0S5	DM0S5	DM0S5	DMOS5
Wafer Process	LBC8	LBC8	LBC8	LBC8	LBC8	LBC8

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL3-260C: TAS883921DCA_DONGBU, TAS883921DCA_RFAB
- Devices contain multiple dies: TAS883921DCA_RFAB, TAS883921DCA_DONGBU

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: TPS1H100AQPWPRQ1	Qual Device: TPS1H100BQPWPRQ1	QBS Product Reference: TPS1H100AQPWPRQ1	QBS Product Reference: TPS1H100BQPWPRQ1	QBS Product Reference: TPS1H100BQPWPRQ1	QBS Process Reference: TPS92630
Test Group A – Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Automotive Preconditioning Level 3	MSL3, 260C peak	-	-	-	1/all/0	-	3/all/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hrs	-	-	-	1/77/0	-	3/231/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hrs	-	-	-	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	-	3/231/0
						post Temp Cycle Bond pull	-	-	-	1/5/0	-	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 cycles	-	-	-	1/45/0	-	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hrs	-	-	-	1/45/0	-	1/45/0
Test Group B – Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	3	77	HTOL 125C	1000Hr	-	-	1/77/0	3/231/0	1/77/0	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	125C (48 Hrs)	-	-	-	-	-	3/2400/0
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)	-	-	-	-	1/30/0	-	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	-	-	-	-	1/30/0	-	1/30/0
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)	-	-	-	-	-	-	3/30/0
SBS	C5	AEC Q100-010	3	50	Solder Ball Shear (Cpk>1.67)	Post HTSL/Bump	NA	NA	NA	NA	NA	NA
SBS	C5	AEC Q100-010	3	50	Solder Ball Shear (Cpk>1.67)	Solder Balls	NA	NA	NA	NA	NA	NA
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	-	NA	NA	NA	NA	NA	NA
Test Group D – Die Fabrication Reliability Tests												
Test Group E – Electrical Verification Tests												

HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	2000 V	-	-	1/3/0	1/3/0	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	500 V (all pins) 750 V (corner pins)	-	-	1/3/0	1/3/0	1/3/0	-
LU	E4	AEC Q100-004	1	6	Latch-up	125C	-	-	-	1/6/0	1/6/0	-
ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	1/30/0	1/30/0	1/30/0	3/90/0	1/30/0	-

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

Junction 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

Change Number: C1506172
TI Qualification ID: 20150625-114240

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