

PCN Number:	20231127002.1		PCN Date:	November 27, 2023	
Title:	Qualification of HFTF as an alternate Assembly site for select devices				
Customer Contact:	Change Management Team	Dept:	Quality Services		
Proposed 1st Ship Date:	Feb 28, 2024	Sample requests accepted until:	Dec 28, 2023*		
*Sample requests received after Dec 28, 2023 will not be supported.					
Change Type:					
<input checked="" 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 checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Material
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
Texas Instruments Incorporated is announcing the qualification of HFTF as an additional Assembly site for set of devices listed below. Construction differences are as follows:					
	Hana	HFTF			
Mold Compound	450596	R-30			
Mount Compound	400180	A-18			
Lead finish	NiPdAu	Matte Sn			
Upon expiration of this PCN, TI will combine lead free solutions in a single <u>standard part number</u> , for example; <u>PCA9306DCTR</u> – can ship with both Matte Sn and NiPdAu.					
Example:					
<ul style="list-style-type: none"> – Customer order for 7500 units of PCA9306DCTR with 2500 units SPQ (Standard Pack Quantity per Reel). – TI can satisfy the above order in one of the following ways. <ul style="list-style-type: none"> I. 3 Reels of NiPdAu finish. II. 3 Reels of Matte Sn finish III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish. IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish. 					
Reason for Change:					
Supply continuity					
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):					
None					
Impact on Environmental Ratings					
Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.					
RoHS	REACH	Green Status	IEC 62474		
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change		
Changes to product identification resulting from this PCN:					

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
Hana	HNT	THA	Ayutthaya
HFTF	HFT	CHN	Hefei

Sample product shipping label (not actual product label)

G4 = NiPdAu
G3 = Matte Sn

(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T) LOT: 3959047MLA
(4W) TKY (1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
(20L) ESO: SRE (21L) CCO: USA
(22L) ASO: MLA (23L) ACO: MYS

Product Affected:	
PCA9306DCTR	PCA9306DCTT

Qualification Report

Approve Date 25-January-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PCA9306DCTR	QBS Reference: TPS51217DSCR	QBS Reference: OPA2388QDGKRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	3/231/0	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	3/231/0	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0
HTOL	B1	Life Test	135C	635 Hours	-	3/231/0	-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	3/228/0	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	3/228/0	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	3/45/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	3/45/0
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	3/30/0
ESD	E2	ESD CDM	-	1500 Volts	-	3/9/0	1/3/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	3/9/0	-
ESD	E2	ESD HBM	-	4000 Volts	-	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	1/3/0	3/18/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/60/0	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	3/90/0

QBS: Qual By Similarity

Qual Device PCA9306DCTR is qualified at MSL1 260C

Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours

The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours

The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

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

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

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