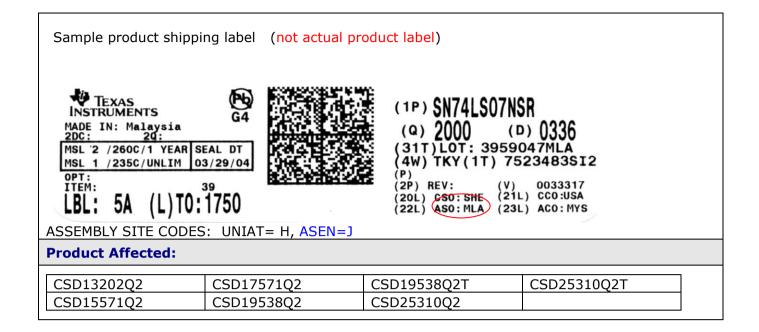
PCN Number:		2	20171017001					Ρ	CN Date:	Oct 23, 2017	
Title: Qualification of			of ASEN as an additional Assembly & Test site for select devices								
Customer Contact:		: <b>t:</b> <u>P(</u>			Dep			Services			
Proposed 1 <sup>st</sup> Ship Date		Date:	lan 23 2018				stimated Sample Dat		te Provided at Sample quest		
Change T	Гуре:										
Assembly Site			Desi						Wafer Bump Site		
	mbly Pro					a Sheet		+ + +	Wafer Bump Material		
	embly Mathematical Spanical Sp		on			: number change t Site		┼┾┼		Nafer Bump Process Nafer Fab Site	
	ing/Ship		= =			t Process		łĦł		Wafer Fab Materials	
		- ,							Wafer Fab Process		
					PC	N Deta	ls				
Descript											
Texas Instruments Incorporated is announcing the qualification ASEN as an Additional Assembly and Test Site for select devices listed in the "Product Affected" Section. Current assembly sites and Material differences are as follows.											
Assemb		Assen	bly Site	e Ori	igin	Assemb	Assembly Country Co		e Assem	bly Site City	
UN			UNM				MYS			Ipoh	
AS	EN		ASN				CHN		5	Suzhou	
Material	Differen	ces:									
			UNIAT				ASEN				
Lead Finish			Matte Sn				NiPdAu		_		
Mount compound			47000011				1400410101				
Mold compound			47160155				1800558151				
Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.											
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			pro rele obt	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 <u>http://www.ti.com/quality/docs/materialcontentsearch.tsp</u>							
Changes to product identification resulting from this PCN:											
Assembly Site											
				ssembly Site Origin (22L) ASO: UNM							
ASEN Assembly Site Origin (22L) ASO: AS											



## **Qualification Report**

Q2 Package Offload to ASEN

Approve Date 03-Oct-2017

## **Product Attributes**

Attributes	Qual Device: CSD13202Q2 ASEN	QBS Package Reference: CSD13202Q2 UNIAT	QBS Package Reference: CSD58911Q2			
Assembly Site	ASEN	UNIAT	ASEN			
Package Family	WSON	QFN/SON	QFN/SON			
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0			
Wafer Fab Supplier	UMC	CFAB	CFAB			
Wafer Process	NEXFET GEN 1.3	NEXFET GEN 1.3	NEXFET GEN1.4			

- QBS: Qual By Similarity

- Qual Device CSD13202Q2 is qualified at LEVEL1-260C

## **Qualification Results**

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

Туре	Test Name / Condition	Duration	Qual Device: CSD13202Q2	QBS Package Reference: CSD13202Q2 UNIAT	QBS Package Reference: CSD58911Q2 ASEN
HBM	ESD - HBM	350 V	-	1/3/0	-
CDM	ESD - CDM	1500 V	-	1/3/0	-
IOL	Intermittent Operating Life	10000 Cycles	-	3/231/0	3/231/0
HTGB	High Temp. Gate Bias, 150C (80% Vgs)	1000 Hours	-	3/231/0	-
HTRB	High Temp. Reverse Bias,	1000	-	3/231/0	-

	150C (80% Vds)	Hours			
SD	Solderability	Pb-Free	-	-	3/15/0
тс	Temperature Cycle, - 55/125C	700 Cycles	3/231/0	3/231/0	3/231/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	-	3/231/0	3/231/0
AC	Autoclave 121C	96 Hours	-	3/231/0	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	3/231/0
YLD	FTY and BIN Summary	-	Pass	Pass	Pass

- 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 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
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