PCN Number:		20131118001A					PCN Date:	02/12/2016				
Title: Qualification		of I	of NFME as Additional Assembly/Test Site for DBV Package Devices									
Customer Contact:			PCN Manager Dept: Quality Se						ervices			
Chan	ge Ty	ype:										
Assembly Site			Assembly Proce			SS		\square		Assembly Materials		
Design				Electrical Specif		icatior	۱			Mechanical Specification		
Test Site					Packing	, g/Shippin	g/Lab	eling			Test Process	
Wafer Bump Site					Wafer Bump Material					Wafer Bump P	Process	
Wafer Fab Site					Wafer Fab Materials						Wafer Fab Pro	cess
					Part nu	mber cha	ange					
PCN Details												
Description of Change:												
Augualif Qualif differe	A lighted in yellow. These devices in the Product Affected Section (with strikethrough) and highlighted in yellow. These devices were inadvertently added and not affected by this change. Qualification of NFME as Additional Assembly/Test Site for DBV Package Devices. Material differences are shown in the following table: • Group 1 – Devices that will have the following change											
				NS2 NEME								
	Wir	2		•	Au	Au. C	u					
	Mol	d Compound	CZ0096		0096	R-17	7					
Leadframe Finish			Ni	PdAu	Matte	Sn						
 Upon expiration of this PCN, TI will combine lead free solutions in a single <u>standard part</u> <u>number</u>, for example; <u>UCC27511DBVR</u> – can ship with both Matte Sn and NiPdAu. Group 2 – Devices that will have Mold Compound change only 												
				1	NS2	NFM	E					
Mold Compound CZ0096 R-17												
Test of test M	Test coverage, insertions, conditions will remain consistent with current testing and verified with test MO											
Reason for Change:												
Continuity of Supply												
1) To align with world technology trends and use wiring with enhanced mechanical and												
ء (electrical properties											
	2) Maximina flavikiliku within ava Accombly/Tech avaduation sites											
∠) Ma 3) Ci	 2) Maximize nexibility within our Assembly/Test production sites. 3) Curis easier to obtain and stock 											
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):												
None	None											
None												

Changes to product identification resulting from this PCN: ECAT: G4 = NiPdAuECAT: G3 = Matte Assembly Site UTAC 2 Thailand Assembly Site Origin (22L) ASO: NS2 ECAT: G4 NFME Assembly Site Origin (22L) ASO: NFM ECAT: G3 Sample product shipping label (not actual product label) TEXAS INSTRUMENTS (Pb) (1P) SN74LS07NSR G4 MADE IN: Malaysia 2DC: 2Q: (Q) 2000 (D) 0336 (31T)LOT: 3959047MLA (4W) TKY(1T) 7523483S12 MSL 2 /260C/1 YEAR SEAL DT MSL 1 /235C/UNLIM 03/29/04 (P) OPT: ITEM: (2P) REV: (V) 0033317 (2DL) CSO: SHE (21L) CCO:USA (22L) ASO: MLA (23L) ACO: MYS 39 5A (L)T0:1750 LBL: ASSEMBLY SITE CODES: NS2 = B, NFME = E**Product Affected: Group 1** UCC27511DBVR UCC27517DBVT UCC27518DBVR UCC27519DBVR UCC27511DBVT UCC27517DBVR UCC27518DBVT UCC27519DBVT **Product Affected: Group 2** UCC27531DBVT UCC27531DBVR UCC27532DBVR UCC27532DBVT

Group 1 : Qualification Data								
This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.								
Qual Vehicle 1 : TPS2051BDBVR (MSL1-260C)								
Package Construction Details								
Assembly Site:	NFME	Mold Compo			I: R-17			
# Pins-Designator, Family:	DBV, SOT-23 Mount		ound:	A-03				
Lead Finish, Base	atte Sn, Cu Bond		Wire: 1.3 Mil		Dia. Cu			
Qualification: 🗌 Plan 🛛 Test Results								
Reliability Test		Conditions		Sample Size / Fail		Size / Fail		
				Lot 1		Lot 2		
Electrical Characterization		-		30/0		30/0		
**Temp Cycle, -65C/150C		500 Cycles		77/0		77/0		
Manufacturability (MQ)		(per mfg. Site specification)		Pass		-		
Moisture Sensitivity		L2-260C			2/0	12/0		
**- Preconditioning sequence: Level 1-260C.								

Qual Vehicle 2 : TPS2552DBVR-1 (MSL1-260C)									
Package Construction Details									
Assembly Site:	NFME		bound:	R-17					
# Pins-Designator, Family:	6-DBV	, SOT-23	oound:	und: A-03					
Lead Finish, Base	Matte	Sn, Cu	Bond	Wire:	2.0 Mil Dia.	Cu			
Qualification: 🗌 Plan 🛛 Test Results									
Reliability Test		Conditions		S	ample Size /	′ Fail			
Reliability Test		Conditions		Lot 1	Lot 2	Lot3			
Electrical Characterization		-		30/0	30/0	30/0			
Manufacturability Qualificatio	n (MQ)	(per mfg. Site sp	Pass	Pass	Pass				
**Life Test		125C (1000 Hrs)		40/0	40/0	40/0			
**Temp Cycle, -65C/150C		500 Cycles	77/0	77/0	77/0				
**High Temp Storage Bake		170C (420 Hrs)		77/0	77/0	77/0			
**Unbiased HAST		130C/85%RH (96	5 Hrs)	77/0	77/0	77/0			
Moisture Sensitivity		L1-260C		12/0	12/0	12/0			
**- Preconditioning sequence	: Level	1-260C.							
Qual	Vehicle	3 : TPS61041	DBVR (MSL 1-26	0C)					
	Pac	kage Construct	tion Details						
Assembly Site:	NFME		Mold Com	bound:	R-17				
# Pins-Designator, Family:	, SOT-23	bound:	A-03						
Lead Finish, Base	Matte	Sn, Cu Bond Wire:			1.3 Mil Dia. Cu				
Qualification: Plan	🛛 Test	Results							
Reliability Test		Conditions	Sample Size / Fail						
Reliability Test		Conditions	Lot 1	Lot 2	Lot3				
Electrical Characterization		-		30/0	30/0	30/0			
Manufacturability Qualificatio	n (MQ)	(per mfg. Site sp	ecification)	Pass	Pass	Pass			
**Temp Cycle, -65C/150C		500 Cycles	77/0	77/0	77/0				
**High Temp Storage Bake		170C (420 Hrs)	77/0	77/0	77/0				
**Unbiased HAST		130C/85%RH (96	77/0	77/0	77/0				
Moisture Sensitivity		L1-260C	12/0	12/0	12/0				
**- Preconditioning sequence	: Level	1-260C.							
Qual	Vehicle	e 4 : TPS2552D	BVR-1 (MSL1-26	0C)					
	Pac	kage Construct	tion Details						
Assembly Site:	NFME		bound:	R-17					
# Pins-Designator, Family:	6-DBV	, SOT-23 Mount Com		bound:	A-03				
Lead Finish, Base	Matte	Sn, Cu	d Wire: 2.0 Mil Dia. Au						
Qualification: 🗌 Plan	🛛 Test	Results							
Reliability Test Conditions Sample Size / Fail									
		Conditions	Lot 1	Lot 2	Lot3				
Electrical Characterization		-	30/0	30/0	30/0				
Manufacturability Qualificatio	n (MQ)	(per mfg. Site sp	Pass	-	-				
**Life Test		125C (1000 Hrs)	40/0	40/0	40/0				
**Temp Cycle, -65C/150C		500 Cycles	77/0	77/0	77/0				
**High Temp Storage Bake		170C (420 Hrs)	77/0	77/0	77/0				
**Unbiased HAST		130C/85%RH (96 Hrs)			77/0	77/0			
**- Preconditioning sequence: Level 1-260C.									

Qual Vehicle 5 : TPS61041DBVR (MSL 1-260C)									
Package Construction Details									
Assembly Site: NF	FME	Mold Comp			R-17				
# Pins-Designator, Family: 5-	, SOT-23 Mount Compo			ound: A-03					
Lead Finish, Base Ma	atte S	n, Cu	Bond	Wire:	1.3 Mil Dia. Au				
Qualification: Plan Test Results									
Reliability Test					Sample Size / Fail				
Reliability Test	Conditions			Lot 2	Lot3				
Electrical Characterization	-			30/0 30/0 3					
Manufacturability Qualification (M	(per mfg. Site specification)			-	-				
**Temp Cycle, -65C/150C		500 Cycles			77/0	77/0			
**High Temp Storage Bake		170C (420 Hrs)		77/0	77/0	77/0			
**Unbiased HAST		130C/85%RH (96	5 Hrs)	77/0	77/0	77/0			
**- Preconditioning sequence: Le	evel 1	-260C.							
G	rou	p 2 : Qualifie	cation Data						
Qual Ve	ehicl	e 1 : TPS2553	DBV (MSL 1-260	C)					
Package Construction Details									
Assembly Site: NF	FME		Mold Comp	ound: R-17					
# Pins-Designator, Family: 6-	-DBV,	, SOT-23 Mount Compou			A-03				
Lead Finish, Base Nil	iPdAu,	a, Cu Bond Wir			: 2.0 Mil Dia. Au				
Oualification: Plan X Test Results									
Reliability Test Conditions Sample Size / Fail									
Electrical Characterization		-			30/0				
Manufacturability Qualification (M	1Q)	(per mfg. Site sp	ecification)		Pass				
**Autoclave		121C (96 Hrs)			77/0				
**Temp Cycle, -65C/150C		500 Cycles			77/0				
Solderability		Steam age, 8 hou	urs		22/0				
Moisture Sensitivity		Level-1, 260C			12/0				
**- Preconditioning sequence: Level 1-260C.									
Qual Ve	ehicle	2 : OPA365A	(DBV (MSL 1-260)C)					
	Pack	kage Construct	tion Details						
Assembly Site: NF	FME	Mold Com		bound:	R-17	र-17			
# Pins-Designator, Family: 5-	-DBV,	, SOT-23 Mount Compound		bound:	A-03				
Lead Finish, Base Nil	iPdAu,	u, Cu Bond Wire:			1.0 Mil Dia. Au				
Qualification: 🗌 Plan 🖾	Qualification: 🗌 Plan 🛛 Test Results								
Reliability Test Conditions Sample Size / Fail									
Manufacturability Qualification (M	1Q)	(per mfg. Site specification)			Pass				
Salt Atmosphere		24 Hrs			22/0				
X-ray		(top side only)			5/0				
**Autoclave		121C (96 Hrs)			77/0				
**Temp Cycle, -65C/150C		500 Cycles			77/0				
**Thermal Shock -65/150C		1000 Cycles			77/0				
**High Temp Storage Bake		170C (420 Hrs)			77/0				
Moisture Sensitivity		Level-1, 260C			12/0				
**- Preconditioning sequence: Le	evel 1	-260C.							

Qual Vehicle 3 : THS4304DBV (MSL 1-260C)								
Package Construction Details								
Assembly Site:	Mold Comp		oound:	R-17				
# Pins-Designator, Family:	SOT-23 Mount Comp		cound:	A-03				
Lead Finish, Base	NiPdAu	ı, Cu	Bonc	d Wire:	Wire: 1.0 Mil Dia. Au			
Qualification: 🗌 Plan 🛛 Test Results								
Reliability Test		Conditions			Sample Size / Fail			
Manufacturability Qualification	(MQ)	(per mfg. Site sp	ecification)	Pass				
Salt Atmosphere		24 Hrs		22/0				
X-ray		(top side only)			5/0			
**Autoclave		121C (96 Hrs)			77/0			
**Temp Cycle, -65C/150C		500 Cycles			77/0			
**Thermal Shock -65/150C		1000 Cycles			77/0			
**High Temp Storage Bake		170C (420 Hrs)		77/0				
Moisture Sensitivity		Level-1, 260C			12/0			
**- Preconditioning sequence: Level 1-260C.								
Qual Vehicle 4 : THS9001DBV (MSL 1-260C)								
Package Construction Details								
Assembly Site:	NFME		Mold Comp	oound:	R-17			
<pre># Pins-Designator, Family:</pre>	6-DBV	, SOT-23 Mount Comp		oound:	A-03			
Lead Finish, Base	ı, Cu	Cu Bond Wir		e: 1.0 Mil Dia. Au				
Qualification: 🗌 Plan	🛛 Test	t Results						
Reliability Test		Conditions		Sample Size / Fail				
Manufacturability Qualification	(MQ)	(per mfg. Site specification)		Pass				
Salt Atmosphere		24 Hrs		22/0				
X-ray		(top side only)		5/0				
**Autoclave		121C (96 Hrs)		77/0				
**Temp Cycle, -65C/150C		500 Cycles		77/0				
**Thermal Shock -65/150C		1000 Cycles		77/0				
**High Temp Storage Bake		170C (420 Hrs)		77/0				
Moisture Sensitivity		Level-1, 260C			12/0			
**- Preconditioning sequence: Level 1-260C.								

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
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