PCN Number:		20	20131118001				PCN Da	te:	11/22/2013				
Title: Qualification		of NFME as Additional Assembly/Test Site for DBV Package Devices											
Cust	omer	Contact:	<u>PCN</u>	l Ma	nager	Phon	<b>e:</b> +1	(214)480-6	5037	Dept:	Qua	ality Services	
Proposed 1 <sup>st</sup> Ship Da		1 <sup>st</sup> Ship Dat	<b>e:</b> 02/22/20		014	Estimated Sample A		Availabilit	t <b>y:</b>	Date Provided at Sample request			
Char	ige T												
$\square$	Assembly Site			$\square$		bly Pro				Assembly			
	Design			Electrical Specification								ecification	
										Test Proc			
		er Bump Site		<u> </u>		Bump				Wafer Bump Process			
	Wafer Fab Site			$\square$	Wafer Fab Materials       Part number change				Wafer Fa	Wafer Fab Process			
					Part n								
Desc	rinti	on of Change				PCI	N Det	alis					
Quali differ	Description of 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												
				Ν	152	N	ME						
	Wir	е		Au Au, Cu			i, Cu						
Мо		ld Compound		CZ0096			·17						
Leadframe Finish			Nif	PdAu	Ma	tte Sn							
num	<ul> <li>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.</li> <li>Group 2 – Devices that will have Mold Compound change only</li> </ul>												
				Ν	152	N	ME	1					
	Мо	ld Compound		CZ	0096	R	·17						
	Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.												
		or Change:											
Conti	Continuity of Supply												
1) To align with world technology trends and use wiring with enhanced mechanical and													
electrical properties													
<ol> <li>Maximize flexibility within our Assembly/Test production sites.</li> <li>Cu is easier to obtain and stock</li> </ol>													
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):													
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** UCC27517DBVT UCC27511DBVR 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 Compound:		R-17				
# Pins-Designator, Family:	5-DBV, SOT-23	Mount Compound:		A-03				
Lead Finish, Base	Matte Sn, Cu	Bond	1.3 Mil Dia. Cu					
Qualification: 🗌 Plan 🛛 Test Results								
Reliability Test	Conditions	Conditions		ample S	Size / Fail			
			Lo	ot 1	Lot 2			
Electrical Characterization	-	-		0/0	30/0			
**Temp Cycle, -65C/150C	500 Cycles	500 Cycles		7/0	77/0			
Manufacturability (MQ)	(per mfg. Site sp	(per mfg. Site specification)		ass	-			
Moisture Sensitivity	L2-260C	L2-260C 1		2/0	12/0			
**- Preconditioning sequence: Level 1-260C.								

Qual Vehicle 2 : TPS2552DBVR-1 (MSL1-260C)							
		kage Construct		,			
Assembly Site:	NFME	Mold Compound:			R-17		
# Pins-Designator, Family:	6-DBV,	SOT-23	pound: A-03				
Lead Finish, Base	Matte S	Sn, Cu	d Wire: 2.0 Mil Dia. Cu				
Qualification: 🗌 Plan 🛛	🛛 Test	Results					
Reliability Test		Conditions	Sample Size / Fail				
·		conditions	Lot 1		Lot3		
Electrical Characterization		-	30/0		30/0		
Manufacturability Qualification	(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	
Moisture Sensitivity		L1-260C		12/0	12/0	12/0	
**- Preconditioning sequence:							
Qual V			DBVR (MSL 1-26	0C)			
	Pac NFME	kage Construct		. 1	R-17		
· · · · ·		bound:					
# Pins-Designator, Family:		, SOT-23 Mount Compou					
	Matte 9	•	Bonc	Wire:	1.3 Mil Dia.	Cu	
Qualification: 🗌 Plan 🛛	🛛 Test	Results					
Reliability Test		Conditions			ample Size		
				Lot 1 30/0	Lot 2 30/0	Lot3 30/0	
Electrical Characterization Manufacturability Qualification	(MO)	-	o cification)	Pass	Pass	Pass	
**Temp Cycle, -65C/150C	(MQ)	(per mfg. Site sp	77/0	77/0	77/0		
		500 Cycles 170C (420 Hrs)	77/0		77/0		
**High Temp Storage Bake **Unbiased HAST		130C/85%RH (96	77/0		77/0		
Moisture Sensitivity		L1-260C	12/0		12/0		
**- Preconditioning sequence:	l evel '			12/0	12/0	12/0	
			BVR-1 (MSL1-26	0C)			
		kage Construct		,			
Assembly Site:	NFME		pound: R-17				
# Pins-Designator, Family:		, SOT-23 Mount Com			A-03		
Lead Finish, Base				d Wire: 2.0 Mil Dia. Au		Au	
		Results					
	_			Sample Size / Fail			
Reliability Test		Conditions		Lot 1		Lot3	
Electrical Characterization		-		30/0	30/0	30/0	
Manufacturability Qualification	(MQ)	(per mfg. Site specification)		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	77/0	77/0	77/0		
**- Preconditioning sequence: Level 1-260C.							

Qual Ve	ehicle	5 : TPS61041	DBVR (MSL 1-26	0C)			
U		kage Construct	-	,			
Assembly Site: N	NFME		Mold Comp	R-17			
# Pins-Designator, Family: 5	5-DBV,	SOT-23	Mount Comp	A-03			
Lead Finish, Base	Matte S	Sn, Cu	Bond	Wire:	1.3 Mil Dia. Au		
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 Qualification (	MQ)	(per mfg. Site sp	Pass	-	-		
**Temp Cycle, -65C/150C		500 Cycles			77/0	77/0	
**High Temp Storage Bake		170C (420 Hrs)		77/0		77/0	
**Unbiased HAST		130C/85%RH (96	5 Hrs)	77/0	77/0	77/0	
**- Preconditioning sequence: L							
(	Grou	p 2 : Qualific	cation Data				
Qual \			DBV (MSL 1-260	C)			
	Pac	kage Construct	tion Details				
Assembly Site: N	NFME		Mold Comp	ound:	R-17		
# Pins-Designator, Family: 6	5-DBV,	SOT-23	Mount Comp	oound:	A-03		
	NiPdAu	u, Cu Bond Wire:			2.0 Mil Dia. Au		
Qualification: 🗌 Plan 🛛	] Test	Results					
Reliability Test		Conditions		S	ample Size	/ Fail	
Electrical Characterization		-			30/0		
Manufacturability Qualification (	MQ)	(per mfg. Site specification)			Pass		
**Autoclave		121C (96 Hrs)			77/0		
**Temp Cycle, -65C/150C		500 Cycles			77/0		
Solderability		Steam age, 8 hours			22/0		
Moisture Sensitivity		Level-1, 260C			12/0		
**- Preconditioning sequence: L			_	_			
Qual V			DBV (MSL 1-260	)C)			
		kage Construct					
/	NFME		· · · · · · · · · · · · · · · · · · ·		R-17		
		SOT-23	Mount Compound: A-03				
-	NiPdAu		Bond	Wire:	1.0 Mil Dia.	Au	
Qualification: 🗌 Plan 🛛	Test	Results				<u> </u>	
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 12/0		
Moisture Sensitivity **- Preconditioning sequence: L		Level-1, 260C			12/0		
		-2000.					

Qual Vehicle 3 : THS4304DBV (MSL 1-260C)								
Package Construction Details								
Assembly Site:	Mold Comp		ound:	R-17				
# Pins-Designator, Family:	SOT-23 Mount Compound:		A-03					
Lead Finish, Base	NiPdAu	ı, Cu	Bond	Wire:	1.0 Mil Dia. Au			
Qualification: 🗌 Plan 🛛	🛛 Test	: Results						
Reliability Test		Conditions			Sample Size / Fail			
Manufacturability Qualification	(MQ)	(per mfg. Site spe	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	260C 12/0					
**- Preconditioning sequence:	**- Preconditioning sequence: Level 1-260C.							
Qual Vehicle 4 : THS9001DBV (MSL 1-260C)								
Package Construction Details								
Assembly Site:	NFME		Mold Comp	oound:	R-17			
# Pins-Designator, Family:	6-DBV	, SOT-23	Mount Compound:		A-03			
Lead Finish, Base	NiPdAu	ı, Cu	Bond Wire:		1.0 Mil Dia. Au			
Qualification: 🗌 Plan 🛛	🛛 Test	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
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com