

PCN Number: 20150310001 **PCN Date:** 03/12/2015

Title: Qualification of NFME as Additional Assembly/Test Site for TPS61097A-33DBVR/T

Customer Contact: [PCN Manager](#) **Dept:** Quality Services

Proposed 1st Ship Date: 06/12/2015 **Estimated Sample Availability:** Date provided at sample request

Change Type:		
<input checked="" type="checkbox"/> Assembly Site	<input type="checkbox"/> Design	<input type="checkbox"/> Wafer Bump Site
<input type="checkbox"/> Assembly Process	<input type="checkbox"/> Data Sheet	<input type="checkbox"/> Wafer Bump Material
<input checked="" type="checkbox"/> Assembly Materials	<input type="checkbox"/> Part number change	<input type="checkbox"/> Wafer Bump Process
<input type="checkbox"/> Mechanical Specification	<input checked="" type="checkbox"/> Test Site	<input type="checkbox"/> Wafer Fab Site
<input type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process	<input type="checkbox"/> Wafer Fab Materials
		<input type="checkbox"/> Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments Incorporated is announcing the Qualification of NFME as Additional Assembly/Test Site for TPS61097A-33DBVR/T. Assembly differences are shown in the following table:

	HNC	NFME
Wire	1.0 Mil Au	1.0 Mil Cu
Mount Compound	400154	A-03
Mold Compound	450228	R-17
Lead Finish	NiPdAu	Matte Sn

Upon expiration of this PCN, TI will combine lead free solutions in a single **standard part number**, for example; **TPS61097A-33DBVR** – can ship with both Matte Sn and NiPdAu.

Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.

Reason for Change:

- Continuity of Supply
- 1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties
 - 2) Maximize flexibility within our Assembly/Test production sites.
 - 3) Cu is easier to obtain and stock

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

None

Changes to product identification resulting from this PCN:

Assembly Site		
Hana China A/T	Assembly Site Origin (22L)	ASO: CHS
NFME A/T	Assembly Site Origin (22L)	ASO: NFM

Sample product shipping label (not actual product label)

ECAT: G4 = NiPdAu
ECAT: G3 = Matte Sn

TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 2d:
 MSL 2 /260C/1 YEAR SEAL DT
 MSL 1 /235C/UNLIM 03/29/04
 OPT:
 ITEM: 39
LBL: 5A (L)T0:1750

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

ASSEMBLY SITE CODES: HNC =9, NFME = E

Product Affected:

TPS61097A-33DBVR	TPS61097A-33DBVT
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Qualification Report

TPS61097A-33DBVR Cu Wire Qualification

Product Attributes

Attributes	Qual Device: TPS61097A- 33DBVR	QBS Product: TPS61097A- 33DBVR	QBS Product: TPS61097	QBS Process: TCA6416PW	QBS Package: TL432ACDBVR	QBS Package: TS321DBVR
Assembly Site	NFME	HNC	HNC	MLA	NFME	NFME
Package Family	SOT	SOT	SOT	TSSOP	SOT-23 (DBV)	SOT-23 (DBV)
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
Die Attributes						
Die Revision	B	B	A	X	-	-
Wafer Fab Site	FREISING (FFAB)	FREISING (FFAB)	FREISING (FFAB)	FFAB	SHE SFAB	SHE SFAB
Wafer Fab Process	LBC7	LBC7	LBC7	LBC7	J12	J11
Passivation	-	-	-	10KACN	10KACN	10KACN
Package Attributes						
Assembly Site	NFME	HNC	HNC	MLA	NFME	NFME
Package Family	SOT	SOT	Boost Converter	TSSOP	SOT-23 (DBV)	SOT-23 (DBV)
Package Designator	DBV	DBV	DBV	PW	DBV	DBV
Package Size (mils)	62.99 X 114.17	62.99 X 114.17	114.17 X 62.99	173.23 X 307.09	120 X 69	120 X 69
Body Thickness (mils)	-	-	57.09	39.37	57	57
Pin Count	5	5	5	24	5	5
Lead Frame Material	Cu	Cu	Cu	Cu	Cu	Cu
Lead Finish	NiPdAu	NiPdAu	NiPdAu	NiPdAu	POST-PLATE	POST-PLATE
Lead Pitch (mils)	-	-	37.4	25.59	95	90.55
Mount Compound	A-03	400154	400154	4042500	A-03	A-03
Mold Compound	R-17	450228	450228	4206193	R-17	R-170
Bond Wire Composition	Cu	Au	Au	Au	Cu	Cu
Bond Wire Diameter (mils)	1.0	1.0	1.0	0.8	1.0	1.0
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

- QBS: Qual By Similarity

- Qual Device TPS61097A-33DBVR is qualified at LEVEL1-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS61097A -33DBVR	QBS Product: TPS61097A -33DBVR	QBS Product: TPS61097	QBS Process: TCA6416PW	QBS Package: TL432ACDBV R	QBS Package: TS321IDBV R
HAST	Biased HAST, 130C/85%RH	96 Hours	1/77/0	-	1/77/0	3/231/0	2/154/0	1/79/0
AC	Autoclave 121C	96 Hours	3/231/0	-	1/77/0	3/231/0	3/231/0	3/231/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	-	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-	1/77/0	3/231/0	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/231/0	-	-	-	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	3/231/0	-	-
TS	Thermal Shock -65/150C	500 Cycles	-	-	-	-	2/154/0	1/77/0
HTOL	Life Test, 150C	300 Hours	-	-	1/76/0	3/231/0	2/154/0	1/77/0
WBS	Ball Bond Shear	Wires	3/228/0	-	-	-	3/231/0	3/231/0
SD	Solderability	PB-free	-	-	-	-	2/44/0	1/22/0
PD	Physical Dimensions	--	-	-	-	-	2/10/0	1/5/0
LI	Lead Fatigue	Leads	-	-	-	-	2/44/0	1/22/0
LI	Lead Pull	Leads	-	-	-	-	2/44/0	1/22/0
HBM	ESD - HBM	4000 V	-	2/6/0	-	-	-	-
CDM	ESD - CDM	1500 V	-	1/3/0	-	1/3/0	-	-
LU	Latch-up	(per JESD78)	-	2/12/0	1/6/0	1/9/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass	Pass	Pass
WBS	Bond Strength	Wires	3/228/0	-	-	-	3/234/0	3/234/0
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	-	2/10/0	-
FLAM	Flammability (UL 94V-0)	--	-	-	-	-	2/10/0	-
FLAM	Flammability (UL-1694)	--	-	-	-	-	2/10/0	-

- 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
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