PCN Number:		2	015071300	0				PC	CN Da	ate:	07/30/2015	
Title	:	Qualification	of I	NFME as ad	ditic	onal Asse	mbly and Tes	t Site	for	r Sele	ct Devi	ces
Customer Contact:			PC	N Manager	D	ept:	Quality	Serv	ices	5		
Pro	posed	1 st Ship Date	e:	10/30/202	15	Estimated Sample Avail		vaila	Date Provided at Sample request			
Cha	nge T	уре:										·
\boxtimes	Asser	mbly Site				Desig	ın			Wa	ıfer Bur	np Site
		mbly Process					Sheet					np Material
\boxtimes		mbly Materials					number chang	е				np Process
Щ		anical Specific			$\underline{\boxtimes}$	Test :					fer Fab	
Ш	Packi	ng/Shipping/L	abe	eling		Test	Process					Materials
										Wa	ifer Fab	Process
_						PCN D	<u>etails</u>					
		on of Change									_	
					emb	oly and T	est Site for Se	elect I	Dev	rices.	Assem	bly differences
are	snown	in the followir	ng t	able:								
				1	EN		NFM	F				
	N/I	Mount compound 0003C10332 A-03			Λ Ω΄)						
	M	lount compour	<u>nd</u>	00030	C103	332	A-03	3				
		ssembly Site		Assembly S	ite	Assem	nbly Country		sem	ıbly S	ite City	
	A	•			ite	Assem				ibly S	_	
	A Li	ssembly Site		Assembly S Origin (22	ite	Assem	nbly Country de (23L)		T	-	ng	
test	LI N cover MQ.	ssembly Site EN FME age, insertions	,	Assembly S Origin (22 LIN NFM	ite L)	Assen Co	nbly Country de (23L) TWN CHN	Ass	T	aichui Jiangs	ng u	
test	LI N cover MQ.	ssembly Site EN FME	,	Assembly S Origin (22 LIN NFM	ite L)	Assen Co	nbly Country de (23L) TWN CHN	Ass	T	aichui Jiangs	ng u	
test Rea	cover MQ.	ssembly Site EN FME age, insertions	,	Assembly S Origin (22 LIN NFM	ite L)	Assen Co	nbly Country de (23L) TWN CHN	Ass	T	aichui Jiangs	ng u	
Rea Cont	cover MQ.	ssembly Site EN FME age, insertions or Change:	s, c	Assembly S Origin (22 LIN NFM onditions w	Site L)	Assen Co emain co	nbly Country de (23L) TWN CHN	Ass	T	aichui Jiangs	ng u	
Rea Cont	cover MQ. son for cinuity	ssembly Site EN FME age, insertions or Change: of Supply	Ma	Assembly S Origin (22 LIN NFM onditions w	site L) vill re clara	emain co ation Declarat on data a Upon pr	nbly Country de (23L) TWN CHN	curre	nt t	aichui Jiangs eesting nt rep	g and v	e driven from
Rea Cont	cover MQ. son for cinuity icipate No In Mater	ssembly Site EN FME age, insertions or Change: of Supply ed impact on npact to the	Ma	Assembly S Origin (22 LIN NFM onditions w aterial Dec Material productions of the pro	Site L) Will remain a serial uction ase. inequality and a serial ase.	emain co ation Declarat on data a Upon pri	nbly Country de (23L) TWN CHN nsistent with ions or Production release TI ECO webs	curre	nt t	aichur Jiangs estine nt rep Illowir eevise	g and v	e driven from production ts can be
Rea Cont	cover MQ. son for cinuity icipate No In Mater	ssembly Site EN FME age, insertions or Change: of Supply ed impact on npact to the rial Declaration	Ma	Assembly S Origin (22 LIN NFM onditions w aterial Dec Material productions of the pro	Site L) Will remain a serial uction ase. inequality and a serial ase.	emain co ation Declarat on data a Upon pri	nbly Country de (23L) TWN CHN nsistent with ions or Production release TI ECO webs	curre	nt t	aichur Jiangs estine nt rep Illowir eevise	g and v	e driven from production ts can be

Assembly Site		
LEN	Assembly Site Origin (22L)	ASO: LIN
NFME	Assembly Site Origin (22L)	ASO: NFM

Sample product shipping label (not actual product label)



ASSEMBLY SITE CODES: LEN = 3, NFME = E

Product Affected:

SN65LVDS1DBVR	SN65LVDS1YDBVR	SN65LVDS2DBVTG4	SN65LVDT2DBVTG4
SN65LVDS1DBVRG4	SN65LVDS2DBVR	SN65LVDT2DBVR	SN65LVDT2YDBVR
SN65LVDS1DBVT	SN65LVDS2DBVRG4	SN65LVDT2DBVRG4	
SN65LVDS1DBVTG4	SN65LVDS2DBVT	SN65LVDT2DBVT	

Qualification Data

NFME Qualification of the DBV packages using R-13 mold compound and A-03 mount compound

Product Attributes

Attributes	Qual Device: INA168NA	Qual Device: OPA244NA
Assembly Site	NFME	NFME
Package Family	-	-
Flammability Rating	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	HFAB/SFAB	HFAB/SFAB
Wafer Fab Process	634G	635G

- QBS: Qual By Similarity
- Qual Device INA168NA is qualified at LEVEL2-260C
- Qual Device OPA244NA is qualified at LEVEL2-260C

Qualification Results

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

Туре	Test Name / Condition	Duration	Qual Device: INA168NA	Qual Device: OPA244NA
AC	Autoclave 121C	96 Hours	1/77/0	1/77/0
HTOL	Life Test, 125C	1000 Hours	1/77/0	1/77/0
LI	Lead Fatigue	Leads	1/22/0	1/22/0
LI	Lead Pull to Destruction	Leads	1/22/0	1/22/0
MISC	Salt Atmosphere	24 Hours	1/22/0	1/22/0
PD	Physical Dimensions		1/5/0	1/5/0
PKG	Lead Finish Adhesion	Leads	1/15/0	1/15/0
SD	Solderability	8 Hours Steam Age	-	1/22/0

Туре	Test Name / Condition	Duration	Qual Device: INA168NA	Qual Device: OPA244NA
TC	Temperature Cycle -65/150C	500 Cycles	1/77/0	1/77/0

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

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

NFME Qualification of the DBV packages with R-13 mold compound

Product Attributes

Attributes	Qual Device: OPA365AIDBV	Qual Device: THS4304DBV	Qual Device: THS9001DBV	Qual Device: TPS3809I50DBV
Qual ID	20090808-8742	20090808-8742	20090808-8742	20090808-8742
Assembly Site	NFME	NFME	NFME	NFME
Package Family	SOT	SOT	SOT	SOT
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DMOS5	FFAB	FFAB	DFAB
Wafer Fab Process	50HPA07	BICOM3	RFSige	LBC3

- QBS: Qual By Similarity
- Qual Device OPA365AIDBV is qualified at LEVEL1-260C
- Qual Device THS4304DBV is qualified at LEVEL1-260C
- Qual Device THS9001DBV is qualified at LEVEL1-260C
- Qual Device TPS3809I50DBV 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: OPA365AIDBV	Qual Device: THS4304DBV	Qual Device: THS9001DBV	Qual Device: TPS3809I50DBV
AC	Autoclave 121C	96 Hours	1/77/0	1/77/0	1/77/0	-
HTSL	High Temp Storage Bake 170C	420 Hours	1/77/0	1/74/0	1/77/0	-
LI	Lead Fatigue	Leads	1/22/0	1/22/0	1/22/0	1/22/0
LI	Lead Pull to Destruction	Leads	1/22/0	1/22/0	1/22/0	1/22/0
MISC	Salt Atmosphere	24 Hours	1/22/0	1/22/0	1/22/0	1/22/0
PD	Physical Dimensions		1/5/0	1/5/0	1/5/0	1/5/0
PKG	Lead Finish Adhesion	Leads	1/15/0	1/15/0	1/15/0	1/15/0
SD	Surface Mount Solderability	Pb Solder	1/22/0	1/22/0	1/22/0	1/22/0
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	-
TS	Thermal Shock -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	-
WBP	Bond Pull	Wires	1/78/0	1/78/0	1/78/0	1/78/0
WBS	Ball Bond Shear	Wires	1/78/0	1/78/0	1/78/0	1/78/0

- 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 Tl's external Web site: http://www.ti.com/

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

NFME 5/6 DBV qualification using R-13 Mold Compound

Product Attributes

· · · · · · · · · · · · · · · · · · ·				
Attributes	Qual Device: SN74LVC2G17DBVR	Qual Device: TL431CDBVR		
Assembly Site	NFME	NFME		
Package Family	SOT	SOT		
Flammability Rating	UL 94 V 0	UL 94 V 0		
Wafer Fab Supplier	TID	SFAB		
Wafer Fab Process	ASL3C	JI BIPOLAR		

- QBS: Qual By Similarity
- Qual Device SN74LVC2G17DBVR is qualified at LEVEL1-260CG
- Qual Device TL431CDBVR is qualified at LEVEL1-260CG

Qualification Results

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

Туре	Test Name / Condition	Duration	Qual Device: SN74LVC2G17DBVR	Qual Device: TL431CDBVR
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0
FLAM	Flammability (IEC 695-2-2)		3/15/0	-
FLAM	Flammability (UL 94V-0)		3/15/0	-
FLAM	Flammability (UL-1694)		3/15/0	-
TC	Temperature Cycle -65/150C	500 Cycles	3/231/0	3/231/0
TS	Thermal Shock -65/150C	500 Cycles	3/231/0	3/231/0
WBP	Bond Strength	Wires	3/234/0	3/234/0

- 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 Tl'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
Japan	PCNJapanContact@list.ti.com