<b>PCN Number:</b> 20130503000				0					PCN Da	te:	05/16/2013	
Title: Alternate Assembly Site for Selected Commercial CDIP Products					oducts	I						
Custo	Customer Contact: PCN Manager Phone: +1(214)480-6037 Dept: Quality Services						lity Services					
Proposed 1 <sup>st</sup> Ship Date: 08/16/2			2013	Estima	ated Sated	amn	le	Availabili	tv:	05/16/2013		
Chang	ne Type:			00/10/1	2010	Lotin					<b>.</b> y <b>.</b>	00/10/2010
	ssembly Site		$\square$	Asser	nbly Pro	cess			$\square$	Assembly	/ Mate	rials
	esign			Electr	rical Spe	cificatio	n			Mechanic	al Spe	ecification
Te	est Site			Packi	ng/Ship	oing/Lab	beling			Test Proc	ess	
W	lafer Bump Site			Wafe	r Bump	Material				Wafer Bu	imp Pi	rocess
W	/afer Fab Site			Wafe	r Fab Ma	terials				Wafer Fa	b Prod	cess
					PC	N Deta	ails					
Descr	ription of Chang	e:										
Qualifi comm	Qualification of Millennium Microtech, Thailand (ALP) as an alternate Assembly site for selected commercial products in ceramic packages.											
.					AP1		ΑΙ	-P				
	Mount Compo	und			10118	2803	03	909	003	34		
	Bond Wire/Dia	a			AI, 1.2	5mil	Al	, 1.2	5m	il		
	Lid				20302	1501	20	302	150	)1		
	Lead Finish				SnPb		Sn	PD				
Reaso	on for Change:											
Cantin												
Contin	nuity of Supply											
Antici None	ipated impact o	n Fo	orr	n, Fit,	Functio	n, Qual	ity or	Reli	abi	lity (posit	tive /	negative):
Chang	ges to product i	den	ntif	ication	resulti	ng fror	n this	PCN	:			
Samp	le Product Ship Assembly S	<b>pin</b> Site	g L	.abel (	not actu	ial produ	uct labe	el)				
	AK1			A	ssembly	Site Or	igin (22	2L)		ASO:	AKR	
	ALP			A	ssembly Site Origin (22L)			ASO:	ALP			
INS MADE 2DC MSL MSL OPT ITEN	TEXAS TRUMENTS IN: Malaysia 20: 1/260C/1 YEAF 1/235C/UNLIM 5A (L)T	03 03	AL 3/2 39 17	G4 9/04				(1F (Q (31 (4W (P) (2P) (201 (221	<pre>&gt;) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (</pre>	SN74LS( 2000 LOT: 39 TKY (1T) EV: CSO: SHE ASO: MLA	)7N\$ (D 5590) 752 (V) (21L (23L)	R ) 0336 47MLA 23483512 0033317 ) CCO:USA ACO: MYS
Topsi Assem Assem	de Device mark ably site code for ably site code for	aing AP1 ALP	: = =	4 8								

## **Product Affected:**

DS16F95AJA	LM124JBLK	LM158AJ	LM5116WG/NOPB
LF147J	LM139AJ/PB	LM158J	LM741J
LM101AJ	LM139AJBLK	LM158J/SL103829	LM95172EWG
LM111J-8	LM139J/PB	LM224J	LM95172EWG/NOPB
LM119J	LM139JBLK	LM239J	LMC6042AIJ
LM124AJ/PB	LM148J/PB	LM324J	LMC6042AJ
LM124AJBLK	LM148JBLK	LM339J	LMH6732J
LM124J/PB			

## **Reference Qualification Data: Approved April 2013**

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.

Qualification Device: LM124AJRLQMLV						
Package Construction Details						
Assembly Site:	ALP		Mount Compound:	039090034		
# Pins-Designator, Family:	14-J,	CDIP	Lid:	203021501		
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil		
Qualification:  Plan	🛛 Te	st Results		•		
Reliability Test		Conditions		Sample Size / Fail		
Operating Life (125C, 1000hr	·s)	MIL-STD-883F	I, Method 1005	45/0		
Moisture Resistance		MIL-STD-883H	I, Method 1004	15/0		
Salt Atmosphere		MIL-STD-883H	I, Method 1009	15/0		
Thermal Shock (-55/125)		MIL-STD-883H	I, Method 1011	15/0		
Temp Cycle (-55/125)		MIL-STD-883H	I, Method 1010	15/0		
Solder ability		MIL-STD-883H	22/0			
Constant Acceleration		MIL-STD-883H	pass			
Mechanical Shock		MIL-STD-883H	pass			
Physical Dimensions		MIL-STD-883H	I, Method 2016	pass		
Lead Integrity		MIL-STD-883F	I, Method 2004	pass		
Lid Torque		MIL-STD-883F	I, Method 2024	pass		
Bond Strength		MIL-STD-883F	pass			
Die Shear		MIL-STD-883F	pass			
Mark Permeability		MIL-STD-883F	pass			
IGA		MIL-STD-883F	pass			
Reference (	Qualif	fication Data	a: Approved April 2	2013		
This qualification has been speci	fically d	eveloped for the	validation of this change. T	he qualification data		
validates that the proposed change meets the applicable released technical specifications.						
Qualification Device: LMH6702JFQMLV						
	Pac	ckage Constru	ction Details	1		
Assembly Site:	ALP		Mount Compound:	039090034		
# Pins-Designator, Family:	8-NAE	B, CDIP	Lid:	203021501		
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil		

Qualification: 🗌 Plan	Qualification: 🗌 Plan 🛛 Test Results					
Reliability Test		Conditions	Sample Size / Fail			
Operating Life (125C, 1000hrs	5)	MIL-STD-883F	I, Method 1005	45/0		
Moisture Resistance		MIL-STD-883F	I, Method 1004	15/0		
Salt Atmosphere		MIL-STD-883F	I, Method 1009	15/0		
Thermal Shock (-55/125)		MIL-STD-883F	I, Method 1011	15/0		
Temp Cycle (-55/125)		MIL-STD-883F	I, Method 1010	15/0		
Solder ability		MIL-STD-883F	I, Method 2003	22/0		
Constant Acceleration		MIL-STD-883F	I, Method 2001	pass		
Mechanical Shock		MIL-STD-883F	I, Method 2012	pass		
Physical Dimensions		MIL-STD-883F	I, Method 2016	pass		
Lead Integrity		MIL-STD-883F	I, Method 2004	pass		
Lid Torque		MIL-STD-883F	I, Method 2024	pass		
Bond Strength		MIL-STD-883F	I, Method 2011	pass		
Die Shear		MIL-STD-883F	I, Method 2019	pass		
IGA		MIL-STD-883F	I, Method 1018	pass		
Reference Qualification Data: Approved April 2013						
This qualification has been specifically developed for the validation of this change. The qualification data						
validates that the proposed change	ge mee	ets the applicable	released technical specifica	tions.		
Qu	alific	ation Device:	LM6142AMJ-QML			
ļ	Pac	ckage Constru	ction Details	7		
Assembly Site:	ALP		Mount Compound:	039090034		
# Pins-Designator, Family:	8-NAE	B, CDIP	Lid:	203021501		
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil		
Qualification: 🗌 Plan 🛛	🛛 Te	st Results		1		
Reliability Test		Conditions	Sample Size / Fail			
Operating Life (125C, 1000hrs	5)	MIL-STD-883F	45/0			
Moisture Resistance		MIL-STD-883F	15/0			
Salt Atmosphere		MIL-STD-883F	15/0			
Thermal Shock (-55/125)		MIL-STD-883F	15/0			
Temp Cycle (-55/125)		MIL-STD-883F	15/0			
Solder ability		MIL-STD-883F	22/0			
Constant Acceleration		MIL-STD-883F	pass			
Mechanical Shock		MIL-STD-883F	pass			
Physical Dimensions		MIL-STD-883F	pass			
Lead Integrity		MIL-STD-883F	pass			
Lid Torque		MIL-STD-883F	pass			
Bond Strength		MIL-STD-883F	I, Method 2011	pass		
Mark Permeability		MIL-STD-883F	I, Method 2015	pass		
IGA		MIL-STD-883F	I, Method 1018	pass		

Reference (	<b>Reference Qualification Data: Approved April 2013</b>						
This qualification has been specif	fically d	leveloped for the	validation of this change. T	he qualification data			
validates that the proposed char	nge mee	ets the applicable	released technical specifica	tions.			
Qualification Device: LMD18200-2D/883							
	Pac	ckage Constru		00000000			
Assembly Site:	ALP		Mount Compound:	039090034			
# Pins-Designator, Family:	24-N/	AZ, CDIP	Lid:	203021501			
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil			
Reliability Test		Conditions		Sample Size / Fail			
Operating Life (125C, 1000hr	s)	MIL-STD-883F	I, Method 1005	45/0			
Moisture Resistance		MIL-STD-883F	I, Method 1004	15/0			
Salt Atmosphere		MIL-STD-883H	I, Method 1009	15/0			
Thermal Shock (-55/125)		MIL-STD-883F	I, Method 1011	15/0			
Temp Cycle (-55/125)		MIL-STD-883F	I, Method 1010	15/0			
Solder ability		MIL-STD-883F	I, Method 2003	22/0			
Constant Acceleration		MIL-STD-883F	I, Method 2001	pass			
Mechanical Shock		MIL-STD-883F	I, Method 2012	pass			
Physical Dimensions		MIL-STD-883H	I, Method 2016	pass			
Lead Integrity		MIL-STD-883H	pass				
Bond Strength		MIL-STD-883F	pass				
Mark Permeability		MIL-STD-883H	I, Method 2015	pass			
IGA		MIL-STD-883F	I, Method 1018	pass			
Reference C	Quali	fication Data	a: Approved April 2	2013			
This qualification has been specif	This qualification has been specifically developed for the validation of this change. The qualification data						
validates that the proposed char	nge mee	ets the applicable	released technical specifica	tions			
	Qualit		: LF444MD/883				
Accombly Site		ckage constru	Mount Compound:	02000024			
# Ding Designator Family:			202021501				
# Fills-Designator, Falliny.		AK, CDIP					
		ct Doculto	st Results				
				Comula Cina / Fail			
Reliability Test			Sample Size / Fall				
Operating Life (125C, 1000hr	rs)	MIL-SID-883F	45/0				
Moisture Resistance		MIL-SID-883F	15/0				
Salt Atmosphere		MIL-SID-883F	15/0				
Thermal Shock (-55/125)		MIL-SID-883F	15/0				
Temp Cycle (-55/125)		MIL-SID-883F	15/0				
Solder ability		MIL-SID-883F	22/0				
Mochanical Shock		WIL-SID-883F	pass				
		MIL-STD-883F	pass				
		MIL-STD-883F	pass				
Pond Strongth		MIL-STD-883F	1, IVIELITUU 2004	pass			
Mark Darmaghility		MIL-STD-883F		pass			
		MIL STD-003F		pass			
		MIL-STD-883H, Method 1018 pass					

Reference	Reference Qualification Data: Approved April 2013						
This qualification has been specif	fically d	eveloped for the	validation of this change. T	he qualification data			
validates that the proposed char	validates that the proposed change meets the applicable released technical specifications.						
	Qualification Device: LM117E/883						
Package Construction Details							
Assembly Site:	ALP		Mount Compound:	039090034			
# Pins-Designator, Family:	20-NA	AJ, CDIP	Lid:	203021501			
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil			
Qualification: 🗌 Plan	🛛 Te	st Results					
Reliability Test		Conditions		Sample Size / Fail			
Operating Life (125C, 1000hr	s)	MIL-STD-883H	I, Method 1005	45/0			
Moisture Resistance		MIL-STD-883H	I, Method 1004	15/0			
Salt Atmosphere		MIL-STD-883H	I, Method 1009	15/0			
Thermal Shock (-55/125)		MIL-STD-883H	I, Method 1011	15/0			
Temp Cycle (-55/125)		MIL-STD-883H	15/0				
Solder ability		MIL-STD-883H	I, Method 2003	22/0			
Constant Acceleration		MIL-STD-883H	I, Method 2001	pass			
Mechanical Shock		MIL-STD-883H	I, Method 2012	pass			
Physical Dimensions		MIL-STD-883H	I, Method 2016	pass			
Lead Integrity		MIL-STD-883H	pass				
Lid Torque		MIL-STD-883H	pass				
Bond Strength		MIL-STD-883H	pass				
Mark Permeability		MIL-STD-883H	pass				
IGA		MIL-STD-883H	pass				
Reference	Qual	ification Data	a: Approved April 20	13			
This qualification has been specif	fically d	eveloped for the	validation of this change. T	he qualification data			
validates that the proposed change meets the applicable released technical specifications.							
Qualification Device: LM723E/883							
Package Construction Details							
Assembly Site:	ALP		Mount Compound:	039090034			
# Pins-Designator, Family:	20-NA	AJ, CDIP	Lid:	203021501			
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil			

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Qualification: 🗌 Plan 🛛 Test Results					
Reliability Test	Conditions	Sample Size / Fail			
Operating Life (125C, 1000hrs)	MIL-STD-883H, Method 1005	45/0			
Moisture Resistance	MIL-STD-883H, Method 1004	15/0			
Salt Atmosphere	MIL-STD-883H, Method 1009	15/0			
Thermal Shock (-55/125)	MIL-STD-883H, Method 1011	15/0			
Temp Cycle (-55/125)	MIL-STD-883H, Method 1010	15/0			
Solder ability	MIL-STD-883H, Method 2003	22/0			
Constant Acceleration	MIL-STD-883H, Method 2001	pass			
Mechanical Shock	MIL-STD-883H, Method 2012	pass			
Physical Dimensions	MIL-STD-883H, Method 2016	pass			
Lead Integrity	MIL-STD-883H, Method 2004	pass			
Lid Torque	MIL-STD-883H, Method 2024	pass			
Bond Strength	MIL-STD-883H, Method 2011	pass			
Mark Permeability	MIL-STD-883H, Method 2015	pass			
IGA	MIL-STD-883H, Method 1018	pass			

## **Reference Qualification Data: Approved April 2013**

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.

Qualification Device: DS1776E/883						
Package Construction Details						
Assembly Site:	ALP		Mount Compound:	039090034		
# Pins-Designator, Family:	28-FK, CD	)IP	Lid:	203021501		
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil		
Qualification: 🗌 Plan	Test Ro	esults				
Reliability Test	Cor	nditions		Sample Size / Fail		
Operating Life (125C, 1000hr	s) MIL	-STD-883H	I, Method 1005	45/0		
Moisture Resistance	MIL	-STD-883H	H, Method 1004	15/0		
Salt Atmosphere	MIL	-STD-883F	15/0			
Thermal Shock (-55/125)	MIL	-STD-883H	15/0			
Temp Cycle (-55/125)	MIL	-STD-883H	15/0			
Solder ability	MIL	-STD-883H	22/0			
Constant Acceleration	MIL	-STD-883H	pass			
Mechanical Shock	MIL	-STD-883H	pass			
Physical Dimensions	MIL	-STD-883H	pass			
Lead Integrity	MIL	-STD-883H	pass			
Lid Torque	MIL	-STD-883H	pass			
Bond Strength	MIL	MIL-STD-883H, Method 2011		pass		
Mark Permeability	MIL	MIL-STD-883H, Method 2015		pass		
IGA	MIL	-STD-883H	H, Method 1018	pass		

Reference Qualification Data: Approved April 2013							
This qualification has been speci	This qualification has been specifically developed for the validation of this change. The qualification data						
validates that the proposed char	nge mee	ets the applicable	released technical specifica	tions.			
Q	<b>)</b> ualifi	cation Device:	AR629AU9/883				
Package Construction Details							
Assembly Site:	ALP		Mount Compound:	039090034			
# Pins-Designator, Family:	180-N	IAT, CDIP	Lid:	203021501			
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil			
Qualification: 🗌 Plan	🛛 Te	st Results					
Reliability Test		Conditions		Sample Size / Fail			
Operating Life (125C, 1000hr	·s)	MIL-STD-883H	45/0				
Moisture Resistance		MIL-STD-883H	15/0				
Salt Atmosphere		MIL-STD-883H	I, Method 1009	15/0			
Thermal Shock (-55/125)		MIL-STD-883F	15/0				
Temp Cycle (-55/125)		MIL-STD-883F	15/0				
Solder ability		MIL-STD-883F	22/0				
Constant Acceleration		MIL-STD-883F	pass				
Mechanical Shock		MIL-STD-883F	pass				
Physical Dimensions		MIL-STD-883F	pass				
Lead Integrity		MIL-STD-883F	pass				
Lid Torque		MIL-STD-883F	pass				
Bond Strength		MIL-STD-883F	I, Method 2011	pass			
Mark Permeability		MIL-STD-883F	I, Method 2015	pass			
IGA		MIL-STD-883F	I, Method 1018	pass			

<b>Reference Qualification Data: Approved April 2013</b>						
This qualification has been specifically developed for the validation of this change. The qualification data						
validates that the proposed char	validates that the proposed change meets the applicable released technical specifications.					
Qualification Device: LMH6702WG-QMLV						
Package Construction Details						
Assembly Site:	ALP	Mount Compound:	039090034			
# Pins-Designator, Family:	10-NAC, CDIP	Lid:	203021501			
Lead Finish: SnPb		Bond Wire:	Al, 1.25mil			

Qualification: 🗌 Plan 🛛 Test Results							
Reliability Test		Conditions	Sample Size / Fail				
Operating Life (125C, 1000hrs	s)	MIL-STD-883H	I, Method 1005	45/0			
Moisture Resistance		MIL-STD-883H	I, Method 1004	15/0			
Salt Atmosphere		MIL-STD-883H	I, Method 1009	15/0			
Thermal Shock (-55/125)		MIL-STD-883H	I, Method 1011	15/0			
Temp Cycle (-55/125)		MIL-STD-883H	I, Method 1010	15/0			
Solder ability		MIL-STD-883F	I, Method 2003	22/0			
Constant Acceleration		MIL-STD-883F	I, Method 2001	pass			
Mechanical Shock		MIL-STD-883F	I, Method 2012	pass			
Physical Dimensions		MIL-STD-883F	I, Method 2016	pass			
Lead Integrity		MIL-STD-883F	I, Method 2004	pass			
Lid Torque		MIL-STD-883F	I, Method 2024	pass			
Bond Strength		MIL-STD-883F	I, Method 2011	pass			
Die Shear		MIL-STD-883H	I, Method 2019	pass			
IGA		MIL-STD-883F	I, Method 1018	pass			
Reference Qualification Data: Approved April 2013							
This qualification has been specifically developed for the validation of this change. The qualification data							
validates that the proposed change	ge mee	ets the applicable	released technical specifica	tions.			
Qualification Device: LM1575J-ADJ-QML							
	Pac	ckage Constru	ction Details	1			
Assembly Site:	ALP	Mount Compound:		039090034			
# Pins-Designator, Family:	15-NF	E, CDIP	Lid:	203021501			
Lead Finish:	SnPb		Bond Wire:	Al, 1.25mil			
Qualification: Plan	🛛 Te	st Results		•			
Reliability Test		Conditions	Sample Size / Fail				
Operating Life (125C, 1000hrs	s)	MIL-STD-883H	45/0				
Moisture Resistance		MIL-STD-883F	15/0				
Salt Atmosphere		MIL-STD-883F	15/0				
Thermal Shock (-55/125)		MIL-STD-883F	15/0				
Temp Cycle (-55/125)		MIL-STD-883F	15/0				
Solder ability		MIL-STD-883H	I, Method 2003	22/0			
Constant Acceleration		MIL-STD-883H	I, Method 2001	pass			
Mechanical Shock		MIL-STD-883H	pass				
Physical Dimensions		MIL-STD-883F	pass				
Lead Integrity		MIL-STD-883F	pass				
Lid Torque		MIL-STD-883H	pass				
Bond Strength		MIL-STD-883H	I, Method 2011	pass			
IGA		MIL-STD-883H	I, Method 1018	pass			
For questions regarding this n	otice,	e-mails can be	sent to the regional cont	acts shown below			
or your local Field Sales Repre	esenta	tive.					
Location	Location E-Mail						

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com