

PCN Number:	20180328002	PCN Date:	April 2, 2018
Title:	Qualification of Aizu as an additional Fab site option for select CMOS7 devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	July 2, 2018	Estimated Sample Availability:	Date provided at sample request.
Change Type:			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Part number change

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of its AIZU fabrication facility as an additional Wafer Fab source for the selected devices listed in "Product Affected" section.

Current Sites			Additional Sites		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
MAINEFAB	CMOS7	200mm	AIZU	CMOS7	200mm

Qual details are provided in the Qual Data Section.

Reason for Change:

Continuity of supply.

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

None

Changes to product identification resulting from this PCN:

Current

Chip Sites	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
MAINEFAB	CUA	USA	South Portland

New

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
AIZU	CU2	JPN	Aizuwakamatsu-shi

Sample product shipping label (not actual product label)



(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

Product Affected:

LM21212AMH-1/NOPB	LM21215AMH-1/NOPB	LM3535TME/NOPB	LP55231SQX/NOPB
LM21212AMHE-1/NOPB	LM21215AMHE-1/NOPB	LM3535TMX/NOPB	LP5523TM/NOPB
LM21212AMHX-1/NOPB	LM21215AMHX-1/NOPB	LP55231SQE/NOPB	LP5523TMX/NOPB

Qualification Report

LP55231SQE Qualification in Aizu Fab - CMOS7 5V Process Approve Date 08-Mar-2018

Product Attributes

Attributes	Qual Device: LP55231SQE NOPB	QBS Product/Process Reference: LP5521TME NOPB	QBS Product/Process Reference: LP8550TLE-E00 NOPB	QBS Process Reference: LM3242TME NOPB
Assembly Site	TIEM-MALACCA	TIEM-MALACCA	TIEM-MALACCA	TIEM-MALACCA
Package Family	QFN	WCSP	WCSP	WCSP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Site	AIZU	AIZU	AIZU	AIZU
Wafer Fab Process	CMOS7 5V	CMOS7 5V	CMOS7 5V	CMOS7 5V

- QBS: Qual By Similarity

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LP55231SQE NOPB	QBS Product/Process: LP5521TME NOPB	QBS Product/Process: LP8550TLE-E00 NOPB	QBS Process: LM3242TME NOPB
AC	Autoclave 121C	96 Hours	-	3/231/0	-	-
ELFR	Early Life Failure Rate, 125C	48 Hours	-	3/915/0	3/905/0	3/915/0
HAST	Biased HAST, 110C/85%RH	264 Hours	-	3/231/0	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	2/154/0	3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	1/77/0	-	-
HTDR	High Temp Data Retention, 250C	82 Hours	-	3/231/0	-	-
HTOL	Life Test, 125C	1000 Hours	-	3/230/0	3/207/0	3/231/0
PRCL	Power Temperature Cycle, 125C	10k Cycles	-	3/231/0	-	-
TC	Temperature Cycle, - 40/125C	700 Cycles	-	3/231/0	-	-
TC	Temperature Cycle, - 65/150C	500 Cycles	-	-	3/227/0	3/231/0
HBM	ESD - HBM	1500 V	1/3/0	-	-	-
HBM	ESD - HBM	2500 V	1/3/0	2/6/0	-	3/9/0
HBM	ESD - HBM	4000 V	1/3/0	-	-	-
CDM	ESD - CDM	750	1/3/0	-	-	3/9/0
CDM	ESD - CDM	1500 V	1/3/0	-	-	-
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	1/6/0	1/6/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	-	-	-

- 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

Qualification Report

LM21212AMHX Qualification in Aizu Fab - CMOS7 5V process Approve Date 20-Mar-2018

Product Attributes

Attributes	Qual Device: LM21212AMHX-1/NOPB	QBS Product/Process Reference: LP5521TME NOPB	QBS Product/Process Reference: LP8550TLE-E00 NOPB	QBS Process Reference: LM3242TME NOPB
Assembly Site	TIEM-MALACCA	TIEM-MALACCA	TIEM-MALACCA	TIEM-MALACCA
Package Family	TSSOP	WCSP	WCSP	WCSP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Site	AIZU	AIZU	AIZU	AIZU
Wafer Fab Process	CMOS7 5V	CMOS7 5V	CMOS7 5V	CMOS7 5V

- QBS: Qual By Similarity

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM21212AMHX- 1/NOPB	QBS Product/Process: LP5521TME NOPB	QBS Product/Process: LP8550TLE-E00 NOPB	QBS Process: LM3242TME NOPB
AC	Autoclave 121C	96 Hours	-	3/231/0	-	-
ELFR	Early Life Failure Rate, 125C	48 Hours	-	3/915/0	3/905/0	3/915/0
HAST	Biased HAST, 110C/85%RH	264 Hours	-	3/231/0	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	2/154/0	3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	1/77/0	-	-
HTDR	High Temp Data Retention, 250C	82 Hours	-	3/231/0	-	-
HTOL	Life Test, 125C	1000 Hours	-	3/230/0	3/207/0	3/231/0
PRCL	Power Temperature Cycle, 125C	10k Cycles	-	3/231/0	-	-
TC	Temperature Cycle, - 40/125C	700 Cycles	-	3/231/0	-	-
TC	Temperature Cycle, - 65/150C	500 Cycles	-	-	3/227/0	3/231/0
HBM	ESD - HBM	1500 V	1/3/0	-	-	-
HBM	ESD - HBM	2500 V	1/3/0	2/6/0	-	3/9/0
HBM	ESD - HBM	4000 V	1/3/0	-	-	-
CDM	ESD - CDM	750 V	1/3/0	-	-	3/9/0
CDM	ESD - CDM	1500 V	1/3/0	-	-	-
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	1/6/0	1/6/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	-	-	-

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

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- 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 you can contact 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