



# PRODUCT INFORMATION LETTER

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PIL AMS-MSH/12/7407  
Dated 03 Aug 2012

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**LIS3DH and LIS3DHTR Transfer to Calamba BE plant**

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Sales Type/product family label	LIS3DH and LIS3DHTR
Type of change	Assembly additional location
Reason for change	Capacity BE Flexibility
Description	Transfer to St Calamba BE (assembly and Final Test) plant
Forecasted date of implementation	03-Sep-2012
Forecasted date of samples for customer	20-Aug-2012
Forecasted date for <b>STMicroelectronics</b> change Qualification Plan results availability	27-Jul-2012
Involved ST facilities	Calamba

## DOCUMENT APPROVAL

Name	Function
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# **Transfer of LIS3DH and LIS3DHTR to ST Calamba back end plant**

## **1. Introduction**

The scope of this Product Information Letter (PIL) is to inform the Customer about the transfer of LIS3DH and LIS3DHTR to ST Calamba plant as Back End 2nd source.

Calamba BE plant is already qualified for Motion MEMS LGA line based on MV55 product line as test vehicle (LIS331DLH commercial product). This product line was fully qualified through the wide reliability program in H1 2011 and it is in mass production since Q2 2011.

Considering that:

- Calamba BE plant is already qualified for MEMS LGA package
- LIS3DH is assembled in the same LGA 3x3 package of MV55

and taking into account that LIS3DH product is already qualified; therefore its transfer on Calamba BE plant has been validated based on similarity criteria and with additional package oriented reliability tests on two lots for further verification.

LIS3DH is considered qualified in Calamba and ready for mass production based on similarity data available for Calamba MEMS LGA line and considering the positive results of the additional tests on LIS3DH.

## 2. Qualification Results

Here follow the list of Calamba LGA line qualification test Matrix on MV55 production line (*figure1*) and the list of the additional tests for LIS3DH transfer validation (*figure 2*).

TEST							
N	TEST NAME	PREC	CONDITION METHOD	STEPS	FAILS/SS		
					LOT 1	LOT 2	LOT 3
1	PC (JL3)	na	Reference specification Jedec J-STD-020 MSL = 3	0h	0/300	0/300	0/300
				final	0/300	0/300	0/300
2	AC	Y	Ta = 121°C , Pressure = 2atm Reference specification Jesd22-A102	0h	0/77	0/77	0/77
				96h	0/77	0/77	0/77
3	HTOL	Y	Ta = 125°C, Tj = 125°C Vdd=3.6V with Self-test actuation Reference specification JESD22-A108	0h	0/40	0/40	0/40
				168h	0/40	0/40	0/40
				500h	0/40	0/40	0/40
				1000h	0/40	0/40	0/40
4	TCT	Y	Low T = - 40°C, High T = +125°C, Reference specification JESD22-A104	0c	0/77	0/77	0/77
				200c	0/77	0/77	0/77
				500c	0/77	0/77	0/77
				1000c	0/77	0/77	0/77
5	THB	Y	TA / RH = +85°C/85%, Tj = 85°C Vdd = 3.0V Reference specification = JESD22-A101	0h	0/40	0/40	0/40
				168h	0/40	0/40	0/40
				500h	0/40	0/40	0/40
				1000h	0/40	0/40	0/40
6	THS	Y	TA / RH = +85°C/85% Reference specification = JESD22-A101	0h	0/77	0/77	0/77
				168h	0/77	0/77	0/77
				500h	0/77	0/77	0/77
				1000h	0/77	0/77	0/77
7	HTS	N	Ta = 150°C Reference specification JESD22-A103	0h	0/77	0/77	0/77
				168h	0/77	0/77	0/77
				500h	0/77	0/77	0/77
				1000h	0/77	0/77	0/77
8	LTS	N	Ta = -40°C Reference specification JESD22-A103	0h	0/77	0/77	0/77
				168h	0/77	0/77	0/77
				500h	0/77	0/77	0/77
				1000h	0/77	0/77	0/77
9	MS	N	3000g Reference specification MIL SDT 883	0h	0/15	0/15	0/15
				Final	0/15	0/15	0/15
10	MS	N	10000g Reference specification MIL SDT 883	0h	0/15	0/15	0/15
				Final	0/15	0/15	0/15

Figure 1: Calamba LGA line Qualification Test Matrix on MV55

TEST							
N	TEST NAME	PREC	CONDITION METHOD	STEPS	FAILS/SS		
					LOT 1	LOT 2	LOT 3
1	PC (JL3)	na	Reference specification Jedec J-STD-020 MSL = 3	0h	0/250	0/250	0/250
				final	0/250	0/250	0/250
2	AC	Y	Ta = 121°C , Pressure = 2 atm Reference specification Jesd22-A102	0h	0/77	0/77	0/77
				96h	0/77	0/77	0/77
3	TCT	Y	Low T = - 40°C, High T = +125°C, Reference specification JESD22-A104	0c	0/77	0/77	0/77
				200c	0/77	0/77	0/77
				500c	0/77	0/77	0/77
4	THS	Y	TA / RH = +85°C/85% Reference specification = JESD22-A101	0h	0/77	0/77	0/77
				168h	0/77	0/77	0/77
				500h	0/77	0/77	0/77
5	HTS	N	Ta = 150°C Reference specification JESD22-A103	0h	0/77	0/77	0/77
				168h	0/77	0/77	0/77
				500h	0/77	0/77	0/77

Figure 2: Additional Test for LIS3DH Transfer Validation

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