

CHANGE NOTIFICATION

NOW PART OF



Analog Devices, Inc.
1630 McCarthy Blvd., Milpitas CA
(408) 432-1900

February 13, 2019

PCN_021319

Dear Sir/Madam:

Subject: Notification of Wafer Fab Location Change for LT8609

Please be advised that Analog Devices, Inc. Milpitas, California is planning to close our Wafer Fab facility located at 275 S. Hillview Dr., Milpitas. Due to this future closure of Wafer Fab facility, the devices LT8609 manufactured using 0.35 BCD process will be affected and transferred to Vanguard International Semiconductor, Taiwan as part of expanding our business partnership. Vanguard International Semiconductor third party certifications and capacity details are attached for your review. Additional information can be found at <http://www.vis.com.tw>.

The qualification of the Vanguard International Semiconductor consisted of 1,000 hours of op-life testing, temp cycle, highly accelerated stress test, autoclave, and 1,000 hours of bake at 150°C. The devices have been characterized over the full operating temperature range and have been subjected to ESD testing and latch up immunity testing. The devices have been found to meet the ADI data sheets. Additionally, devices from the Vanguard International Semiconductor were carefully compared to the ADI fabricated devices to ensure identical performance when installed in customer applications.

Affected Part Numbers			
1	LT8609EMSE#PBF	13	LT8609AEMSE#TRPBF
2	LT8609IMSE#PBF	14	LT8609AIMSE#TRPBF
3	LT8609HMSE#PBF	15	LT8609BEMSE#TRPBF
4	LT8609AEMSE#PBF	16	LT8609BIMSE#TRPBF
5	LT8609AIMSE#PBF	17	LT8609AHMSE#TRPBF
6	LT8609BEMSE#PBF	18	LT8609AHMSE16#TRPBF
7	LT8609BIMSE#PBF	19	LT8609IMSE#3KFPBF
8	LT8609AHMSE#PBF	20	LT8609AIMSE#3LCPBF
9	LT8609AHMSE16#PBF	21	LT8609AIMSE#3ZZPBF
10	LT8609EMSE#TRPBF		
11	LT8609IMSE#TRPBF		
12	LT8609HMSE#TRPBF		

Confidential Statement

This change notice is for Analog Devices, Inc.'s customers only.
Distribution or notification to third parties is prohibited.

The devices manufactured in Vanguard International Semiconductor will have the same part number and the same top mark as those manufactured at ADI. However, when necessary we can use our lot number traceability system to identify where and when a device was fabricated.

We are currently increasing production of new products in Vanguard, and we are not releasing new products in our Hillview fab. We are actively transferring existing products from our Hillview fab to Vanguard. We must transfer all high-volume products to Vanguard before the end of 2019 to free up capacity in Hillview. During year 2020 Hillview capacity will be used for “bridge build inventory” of low running products so that products will not be obsoleted (no obsolescence, no end of life) due to the transfer process. **Therefore, we need your expedited approval of this PCN, well in advance of December 2019.** By February 2021, all production in Hillview will cease.

Analog devices will accept sample requests for parts built at Vanguard Semiconductor International within 30 days of the date of this notification. If we do not hear back from your company within 30-day period, we will consider this change notice accepted by April 13, 2019. Production shipments of the products built at Vanguard Semiconductor International will begin no sooner than April 13, 2019.

Should you have any questions or concerns please contact your local Analog Devices sales representatives or you may contact me at 408-432-1900 ext. 2077, or by e-mail at JASON.HU@ANALOG.COM. If I do not hear from you by April 13, 2019, we will consider this change to be approved by your company.

Sincerely,

Jason Hu
Quality Assurance Engineer

For questions on this PCN, please contact Jason Hu or you may send an email to your regional contacts below or contact your local ADI sales representatives.

Americas: PCN_Americas@analog.com	Europe: PCN_Europe@analog.com	Japan: PCN_Japan@analog.com
		Rest of Asia: PCN_ROA@analog.com



Vanguard International Semiconductor Corporation

Vanguard International Semiconductor Summary

- Plant Address
123, Park Ave-3rd, Science-Based Industrial Park, Hsinchu, Taiwan 30077, R.O.C.
- Headcount
5,200
- Total Building size in sq. ft. and fab size in sq. meters
880,543.3 sq. feet (Building 1)
- Clean room floor space in sq. meters
12,600 sq. meters (Building 1)
- Fab utilization in percent
Fab 1: 100%
- Land Area in sq. meters
41,925 sq. meters
- Wafer capacity for each facility
Fab 1: 87K wafers per month (ADI's material is scheduled to run in Fab 1)
- A list of certifications (i.e. TS16949, ISO-14001, etc.)
 - ISO 9001 Quality Management System (since 1996)
 - ISO 14001 Environment Management System (since 1997)
 - OHSAS 18001 Health & Safety Management System (since 2003)
 - QC 080000 Hazardous Substance Management System (since 2007)
 - ISO 27001 Information Security Management System (since 2015)
 - IATF 16949 Automotive Quality Management System (since 2018)



RELIABILITY DATA
BCD 0.35um Fab Transfer
1/18/2019

• OPERATING LIFE TEST					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +150°C	NUMBER OF FAILURES
QFN	462	1741	1824	462	0
MSOP	231	1737	1810	231	0
SOT	231	1744	1802	231	0
Total	924			924	0
• EARLY LIFE FAILURE RATE					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +150°C	NUMBER OF FAILURES
QFN	4108	1741	1824	197.2	0
SOT	2520	1744	1802	121	0
Total	6628			318.2	0
• HIGHLY ACCELERATED STRESS TEST (HAST) AT +130°C / 85%RH					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	Equivalent K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
QFN	480	1741	1824	92.2	0
MSOP	539	1722	1810	103.5	0
SOT	240	1744	1802	46.1	0
Total	1259			241.8	0
• PRESSURE COOKER TEST (PCT) AT 15PSIG, +121°C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
QFN	540	1741	1824	181.4	0
MSOP	462	1722	1810	155.2	0
SOT	298	1744	1802	100.1	0
Total	1300			436.7	0
• TEMPERATURE CYCLE (TC) TEST AT -65°C to +150°C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
QFN	530	1741	1824	829	0
MSOP	462	1722	1810	693	0
SOT	300	1744	1802	600	0
Total	1292			2122	0
• THERMAL SHOCK (TS) TEST AT -65°C to +150°C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
MSOP	448	1722	1810	896	0
Total	448			896	0
• HIGH TEMPERATURE STORAGE LIFE TEST AT +150°C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
QFN	297	1741	1824	297	0
MSOP	461	1722	1810	461	0
SOT	49	1802	1802	98	0
Total	807			856	0
(1) Failure Rate Equivalent to +55C, Assuming 60% Confidence Level & Activation Energy of 0.7eV = 3.82FIT					
(2) Mean Time Between Failures (MTBF) = 29,919 yr					
Note: HAST, PCT, and TC tests are preceded by JEDEC Preconditioning: 168h 85°C/85% R.H. plus 3x IR at 260°C					
Note: 1 FIT = 1 Failure in One Billion Hours.					

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