

# CHANGE NOTIFICATION



Linear Technology Corporation  
1630 McCarthy Blvd., Milpitas, CA 95035-7417  
(408) 432-1900

January 11, 2016

Dear Sir/Madam:

PCN# 011116

## **Subject: Notification of Additional Assembly Location, ASE Korea for LTM4627**

Please be advised that Linear Technology Corporation has successfully qualified ASE Korea as an assembly site for the subject packages. It was desirable to qualify ASE Korea to serve as an alternate source since it is located in a different geographic area than our existing assembly location in Penang, Malaysia. ASE Korea is ISO9002, QS9000, ISO14001, TS16949, OHSAS 18001 and QC80000 certified. A summary of ASE Korea's product mix and LTC's qualification results are shown on the attached pages. The facility passed a site audit by LTC's supplier quality organization. LTC product assembled in ASE Korea can be identified by the country of origin marked on the device as "KR". The Approximate datecode of the first units assembled by ASE Korea, and the list of affected part numbers is presented below in the table.

<b>PART NUMBER</b>	<b>PART MARKING</b>	<b>PACKAGE TYPE</b>	<b>Datecode (Approx.)</b>
LTM4627EV#PBF	LTM4627V	LGA	1527
LTM4627IV#PBF	LTM4627V	LGA	

The change was qualified by performing extensive characterization over the full operating voltage and temperature ranges and MSL3 preconditioning as well as 1000 cycles of temperature cycle and thermal shock. Devices from the same  $\mu$ Module device product family have been subjected to 1000 hrs. burn-in without failure. Linear Technology performs reliability testing on production lots in accordance with our Quick Reaction Reliability (QR2) Monitor Program. This monitor program is designed to provide fast feedback for possible reliability problems associated with package assembly. Please provide an expeditious approval to this PCN, so that LTC can build subject packages at ASE.

Customers must request samples and additional data within 30 days of the date of this notification. If samples are requested later than 30 days and too close to PCN's expiration date, due to inventory and backlog management, Linear Technology may not be able to accommodate customer's request to receive older product. Production shipments of product incorporating the alternate assembly will begin no sooner than March 11, 2016.

Should you have any concerns, please contact me before March 11, 2016, at which time we will consider this change to be approved. If you have any questions or concerns, please feel free to contact me at (408) 432-1900 ext. 2077 or by e-mail at [JASON.HU@LINEAR.COM](mailto:JASON.HU@LINEAR.COM).

Sincerely,

Jason Hu  
Quality Assurance Engineer

## ASE Korea Capacity Summary

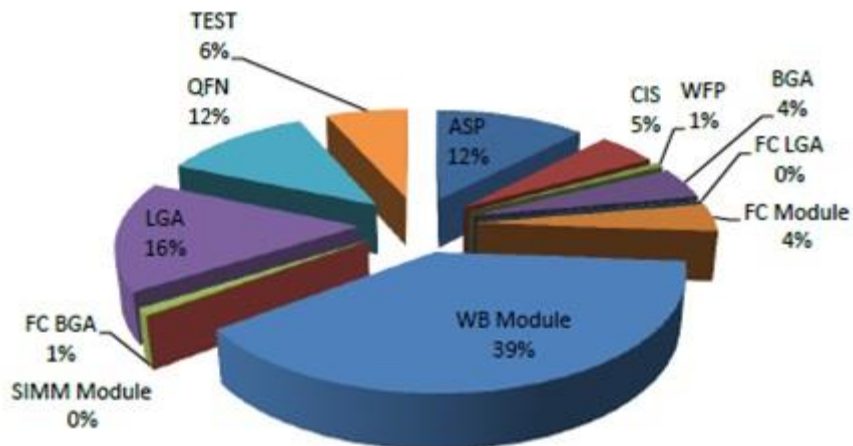
ASE Korea  
76, Saneopdanji-gil, Paju-si,  
Gyeonggi-do, Korea  
Tel: 82-31-9400-114, 82-31-9400-539  
Head counts: 2,791

# Package Portfolio - Breakdown



- Analog Power for Automotive
- RF for digital/consumer
- MEMS for safety
- Array Packages

## 2015 Production Mix by Package



Confidential Statement

This change notice is for Linear Technology's Customers only.  
Distribution or notification to third parties is prohibited.

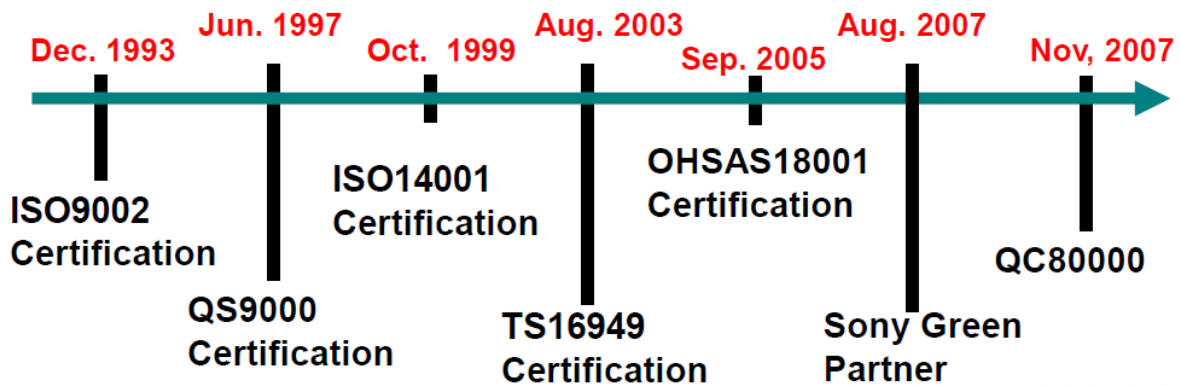
# Quality System Certification



- ISO9002 certified by SGS-Yarsely in December 1993.
- QS9000 certified by LRQA in June 1997
- ISO14001 certified by LRQA in October 1999
- TS16949 certified by LRQA in August 2003
- OHSAS18001 certified by KFQ in September 2005
- Sony Green Partner certified by Sony in August 2007
- QC80000 certified by SGS in November 2007

\*Surveillance Audit : Every 6 Months

## --- Assessment History-----



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**PACKAGE RELIABILITY DATA  
LTM4627 ASE ASSEMBLY SITE QUALIFICATION**

**1/6/2016**

<b>• J-STD-020 MSL 3 PRECONDITIONING: 192h +30°C/60%R.H. SOAK, 3x REFLOW AT +245°C PEAK</b>					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE		NUMBER OF FAILURES
LTM4628	419 419	1533	1533		0 0
<b>• TEMP CYCLE FROM -55°C to +125°C <sup>(1)</sup></b>					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM4628	171 171	1533	1533	55.18 55.18	0 0
<b>• THERMAL SHOCK FROM -55°C to +125°C <sup>(1)</sup></b>					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM4628	124 124	1533	1533	62.00 62.00	0 0
<b>• UNBIASED HIGHLY ACCELERATED STRESS TEST +130°C/85% R.H. <sup>(1)</sup></b>					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
LTM4628	77 77	1533	1533	8.45 8.45	0 0
(1) Environmental stress are preceded by J-STD-020 Level 3 Preconditioning: 192h 30°C/60% R.H. soak, followed by 3x Reflow at 245°C					

## Top Mark



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