

## CHANGE NOTIFICATION



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

May 06, 2014

Dear Sir/Madam:

PCN# 050615

**Subject: Notification of Qualification of Alternate Component for the LTM4637  $\mu$ Module Regulator**

This notice is to inform you that Linear Technology has qualified an alternate source for the inductor used in the assembly of the LTM4637  $\mu$ Module regulator. There is a minor adjustment of solder mask on the substrate to accommodate the inductor's footprint. There is no effect on customer applications since there is no change in form, fit, function, quality or reliability of the products. This qualification has been done to expand production capacity in order to provide greater supply assurance and reduced product lead times.

The alternate source inductor has been qualified through characterization over the full operating junction temperature range and through rigorous engineering bench evaluations. Electrical and thermal performance of devices using the alternate source inductor is unchanged. In addition, standard qualification tests were successfully completed, including power cycling, Thermal shock, temperature cycling and high temperature operating life. The qualification results summary is attached. Products built using the alternate source are targeted for shipment after July 7, 2015. The list of affected part numbers is shown below

**List of part numbers affected:**

LTM4637EV#PBF  
LTM4637IV#PBF  
LTM4637EY#PBF  
LTM4637IY#PBF  
LTM4637IY

Should you have any further questions or concerns please contact your local Linear Technology Sales person or you may contact me at 408-432-1900 ext. 2077, or by e-mail at [jason.hu@linear.com](mailto:jason.hu@linear.com). If I do not hear from you by July 7, 2015, we will consider this change to be approved by your company.

Sincerely,

Jason Hu  
Quality Assurance Engineer

**PACKAGE RELIABILITY DATA**  
**LTM4637 Second Source Inductor Qualification**  
**4/30/2015**

**• OPERATING LIFE TEST AT +125°C**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT 125C	NUMBER OF FAILURES
LTM4637	77 77	1326	1326	77.00	0 0

**• POWER CYCLING: TJ FROM +50°C TO +100°C**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM4637	8 8	1326	1326	400.00	0 0

**• HIGH TEMPERATURE BAKE at 150°C**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +150°C	NUMBER OF FAILURES
LTM4637	77 77	1326	1326	77.00 77.00	0 0

**• TEMP CYCLE FROM -55°C to +125°C <sup>(1)</sup>**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM4637	77 77	1326	1326	81.24 81.24	0 0

**• THERMAL SHOCK FROM -55°C to +125°C <sup>(1)</sup>**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM4637	77 77	1326	1326	77.00 77.00	0 0

**• UNBIASED HIGHLY ACCELERATED STRESS TEST +130°C/85%R.H. <sup>(1)</sup>**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
LTM4630 <sup>(2)</sup>	77 77	1323	1323	7.39 7.39	0 0

(1) Environmental stress are preceded by JEDEC Level 4 Preconditioning: 96h 30°C/60% R.H. plus 3x Reflow at 245°C.

(2) Inductor from same manufacturer part family and assembly line. LTM4630 Unbiased HAST preceded by MSL 3 Preconditioning.