

## CHANGE NOTIFICATION



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

August 18, 2015

Dear Sir/Madam:

PCN# 081815

### **Subject: Notification of Lead Frame Change to S8E Package**

Please be advised that Linear Technology Corporation is making a change to the lead frame plating material, standoff height, and MSL rating of the S8E package to improve the solderability and be able to solder down the exposed pad to PCB.

The current leadframe plating material (NiPdAu) will be replaced by Matte Tin plating to align with other packages manufactured by LTC. Additionally the package has been reclassified from MSL level 1 to level 3 to prevent the package delamination during the IR reflow process.

Product performance and specifications are not affected by this change in material, however the package standoff of the S8E package is being reduced to better match the standoff of the MSOP and TSSOP exposed-pad packages as shown in attached figure.

The devices built using this new lead frame material were qualified by performing full characterization over the operating temperature range. These devices were further subjected to reliability tests outlined in attached reliability data report. Products built using improved design can be identified by "e3" on the top mark as shown in attached figures. All affected part numbers are listed as follows:

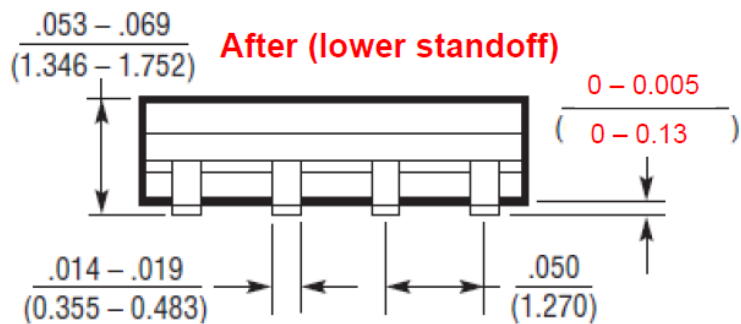
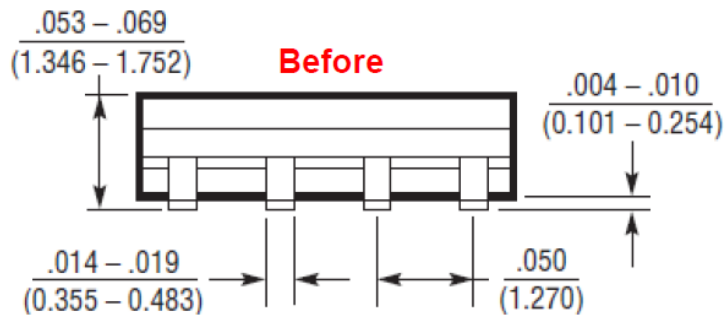
<b>Lead Free Finish</b>	<b>Tape and Reel</b>	<b>Part Marking</b>
LTC6090CS8E-5#PBF	LTC6090CS8E-5#TRPBF	60905
LTC6090IS8E-5#PBF	LTC6090IS8E-5#TRPBF	60905
LTC6090HS8E-5#PBF	LTC6090HS8E-5#TRPBF	60905
LTC6090CS8E#PBF	LTC6090CS8E#TRPBF	6090
LTC6090IS8E#PBF	LTC6090IS8E#TRPBF	6090
LTC6090HS8E#PBF	LTC6090HS8E#TRPBF	6090
LT8302ES8E#PBF	LT8302ES8E#TRPBF	8302
LT8302IS8E#PBF	LT8302IS8E#TRPBF	8302
LT8302HS8E#PBF	LT8302HS8E#TRPBF	8302
LT8302MPS8E#PBF	LT8302MPS8E#TRPBF	8302

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 October 19, 2015, we will consider this change to be approved by your company.

Sincerely,

Jason Hu  
Quality Assurance Engineer

# Lower Standoff SOIC 8L Exposed Pad



Linear Technology Confidential

**RELIABILITY DATA**  
**Matte Tin Plating on SOIC Packages**

Qualification Vehicle - LT8302

**8/13/2015**

**• PRESSURE COOKER TEST AT 15 PSIG, +121°C**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
SOIC	231	1517	1517	38.81	0
	231			38.81	0

**• TEMP CYCLE FROM -65°C to +150°C**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SOIC	231	1517	1517	115.50	0
	231			115.50	0

**• THERMAL SHOCK FROM -65°C to +150°C**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SOIC	231	1517	1517	231.00	0
	231			231.00	0

**• HIGH TEMPERATURE STORAGE LIFE AT +150°C**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
SOIC	150	1517	1517	150.00	0
	150			150.00	0

Before (e4)

After (e3)

