

# PRODUCT CHANGE NOTIFICATION



Linear Technology Corporation  
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(408) 432-1900

March 10, 2017

PCN# 031017

Dear Sir/Madam:

**Subject: Notification of Change for 8-Lead SOIC Exposed (S8E) Package to be assembled at the Linear Technology Factory in Penang, Malaysia**

Linear Technology is pleased to announce that we have passed all of the initial qualification tests required to build 8-lead SOIC exposed package in our own factory in Penang, Malaysia.

The LTC Penang factory will serve as an additional assembly location for 8-lead SOIC exposed package. The Penang plant is a mature manufacturing facility, which has been manufacturing a variety of plastic packages since November 1994. We have now added the necessary manufacturing capability to assemble our own 8-lead SOIC exposed package.

The assembly plant in Penang is 100% owned and operated by Linear Technology and is equipped with the latest state-of-the-art assembly equipment. Attached you will find qualification results of the 8-lead SOIC exposed package devices used to qualify the Penang assembly location. We performed tests such as high temperature storage bake, operating life, pressure cooker, temp cycle, thermal shock, solderability, x-ray inspection and scanning acoustic microscopy to qualify this package. These qualification lots are continuing reliability testing to achieve long-term reliability information. The list of affected part numbers is shown in attached page.

Additionally, as with all changes of this nature, Linear Technology will perform reliability monitor testing on all lots processed in Penang under our Quick Reaction Reliability (QR<sup>2</sup>) program. Product assembled at LTC Penang will be shipped with a datecode of approximately 1646.

Should you have any further questions, please feel free to contact your local Linear Technology sales person or you may contact me at 408-432-1900 ext. 2077, or by E-mail [JASON.HU@LINEAR.COM](mailto:JASON.HU@LINEAR.COM). If I do not hear from you before May 10, 2017, we will consider this change to be approved by your company.

Sincerely,

Jason Hu

Quality Assurance Engineer

<b>List of Affected Parts list</b>		
<b>Product ID</b>	<b>Product Core</b>	<b>Package</b>
LTC6090CS8E#PBF	LTC6090CS8E	S8E
LTC6090CS8E#TRPBF	LTC6090CS8E	S8E
LTC6090HS8E#PBF	LTC6090HS8E	S8E
LTC6090HS8E#TRPBF	LTC6090HS8E	S8E
LTC6090IS8E#PBF	LTC6090IS8E	S8E
LTC6090IS8E#TRPBF	LTC6090IS8E	S8E
LT8302ES8E#PBF	LT8302ES8E	S8E
LT8302ES8E#TRPBF	LT8302ES8E	S8E
LT8302IS8E#PBF	LT8302IS8E	S8E
LT8302IS8E#TRPBF	LT8302IS8E	S8E
LT8302HS8E#PBF	LT8302HS8E	S8E
LT8302HS8E#TRPBF	LT8302HS8E	S8E
LT8302MPS8E#PBF	LT8302MPS8E	S8E
LT8302MPS8E#TRPBF	LT8302MPS8E	S8E
LTC6090CS8E#3JJPBF	LTC6090CS8E#3JJPBF	S8E
LTC6090CS8E#3JJTRPBF	LTC6090CS8E#3JJTRPBF	S8E
LTC6090HS8E-5#PBF	LTC6090HS8E-5	S8E
LTC6090HS8E-5#TRPBF	LTC6090HS8E-5	S8E
LTC6090IS8E-5#PBF	LTC6090IS8E-5	S8E
LTC6090IS8E-5#TRPBF	LTC6090IS8E-5	S8E
LTC6090CS8E-5#PBF	LTC6090CS8E-5	S8E
LTC6090CS8E-5#TRPBF	LTC6090CS8E-5	S8E
LTC6090IS8E#TRMPBF	LTC6090IS8E	S8E
LT8304ES8E#PBF	LT8304ES8E	S8E
LT8304IS8E#PBF	LT8304IS8E	S8E
LT8304ES8E#TRPBF	LT8304ES8E	S8E
LT8304IS8E#TRPBF	LT8304IS8E	S8E
LT6018IS8E#PBF	LT6018IS8E	S8E
LT6018IS8E#TRPBF	LT6018IS8E	S8E
LT6018HS8E#PBF	LT6018HS8E	S8E
LT6018HS8E#TRPBF	LT6018HS8E	S8E
LT8304ES8E-1#PBF	LT8304ES8E-1	S8E
LT8304ES8E-1#TRPBF	LT8304ES8E-1	S8E
LT8304IS8E-1#PBF	LT8304IS8E-1	S8E
LT8304IS8E-1#TRPBF	LT8304IS8E-1	S8E
LT8304HS8E-1#PBF	LT8304HS8E-1	S8E
LT8304HS8E-1#TRPBF	LT8304HS8E-1	S8E
LT8304HS8E#PBF	LT8304HS8E	S8E
LT8304HS8E#TRPBF	LT8304HS8E	S8E

**RELIABILITY DATA**  
**8L SOIC Exposed Package transfer to LTC PENANG**

**3/7/2017**

**• OPERATING LIFE TEST**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +125°C	NUMBER OF FAILURES
S8E	78	1646	1646	13.10	0
	78			13.10	0

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

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
S8E	300	1640	1640	100.80	0
	300			100.80	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
S8E	300	1640	1640	300.00	0
	300			300.00	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
S8E	300	1640	1640	450.00	0
	300			450.00	0

**• HIGH TEMPERATURE BAKE +175°C**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
S8E	149	1640	1640	149.00	0
	149			149.00	0

**• SOLDER SHOCK**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE		NUMBER OF FAILURES
S8E	150	1640	1640		0
	150				0