CHANGE NOTIFICATION

LINEAR TECHNOLOGY

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

August 14, 2013

Dear Sir/Madam: PCN# 081413

Subject: <u>Notification of Change to LT8610 Datasheet</u>

Please be advised that Linear Technology Corporation has made a minor change to the LT8610 product datasheet to take into account the effects seen due to package related stress during assembly process. The changes are shown on the attached page of the marked up datasheet. There was no change made to the product die or to the temperature limit for Vref. The product shipped after October 13, 2013 will be tested to the new limits.

Should you have any further questions, please feel free to contact me at 408-432-1900 ext. 2077, or by e-mail at <u>JASON.HU@linear.com</u>. If I do not hear from you by October 16th, 2013, we will consider this change approved by your company.

Sincerely,
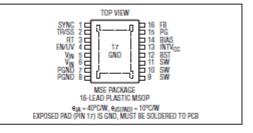
Jason Hu
Quality Assurance Engineer

ABSOLUTE MAXIMUM RATINGS

(Note 1)

V_{IN}, EN/UV, PG 42V
BIAS 30V
BST Pin Above SW Pin 4V
FB, TR/SS, RT, $INTV_{CC}$ 4V
SYNC Voltage 6V
Operating Junction Temperature Range (Note 2)
    LT8610E .... −40 to 125°C
    LT8610I .... −40 to 125°C
Storage Temperature Range .... −65 to 150°C

PIN CONFIGURATION

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                    TOP VIEW
      SYNC  1 ┌─────────┐ 16  FB
     TR/SS  2 │         │ 15  PG
        RT  3 │         │ 14  BIAS
     EN/UV  4 │    17   │ 13  INTVcc
       VIN  5 │   GND   │ 12  BST
       VIN  6 │         │ 11  SW
      PGND  7 │         │ 10  SW
      PGND  8 └─────────┘  9  SW
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MSE PACKAGE
16-LEAD PLASTIC MSOP
θ_{JA} = 40°C/W, $\theta_{J(PAD)}$ = 10°C/W
EXPOSED PAD (PIN 17) IS GND, MUST BE SOLDERED TO PCB

ORDER INFORMATION

LEAD FREE FINISH	TAPE AND REEL	PART MARKING*	PACKAGE DESCRIPTION	TEMPERATURE RANGE
LT8610EMSE#PBF	LT8610EMSE#TRPBF	8610	16-Lead Plastic MSOP	−40°C to 125°C
LT8610IMSE#PBF	LT8610IMSE#TRPBF	8610	16-Lead Plastic MSOP	−40°C to 125°C

Consult LTC Marketing for parts specified with wider operating temperature ranges. *The temperature grade is identified by a label on the shipping container.
Consult LTC Marketing for information on non-standard lead based finish parts.

For more information on lead free part marking, go to: http://www.linear.com/leadfree/
For more information on tape and reel specifications, go to: http://www.linear.com/tapeandreel/

ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at T_A = 25°C.

PARAMETER	CONDITIONS		MIN	TYP	MAX	UNITS
Minimum Input Voltage		●		2.9	3.4	V
V_{IN} Quiescent Current	$V_{EN/UV}$ = 0V, V_{SYNC} = 0V			1.0	3	μA
		●		1.0	8	μA
	$V_{EN/UV}$ = 2V, Not Switching, V_{SYNC} = 0V			1.7	4	μA
		●		1.7	10	μA
	$V_{EN/UV}$ = 2V, Not Switching, V_{SYNC} = 2V			0.24	0.5	mA
V_{IN} Current in Regulation	V_{OUT} = 0.97V, V_{IN} = 6V, Output Load = 100μA	●		24	50	μA
	V_{OUT} = 0.97V, V_{IN} = 6V, Output Load = 1mA	●		210	350	μA
Feedback Reference Voltage	V_{IN} = 6V, I_{LOAD} = 0.5A		0.964	0.967	0.970	0.973 0.976 V
	V_{IN} = 6V, I_{LOAD} = 0.5A	●	0.958	0.970	0.982	V
Feedback Voltage Line Regulation	V_{IN} = 4.0V to 42V, I_{LOAD} = 0.5A	●		0.004	0.02	%/V
Feedback Pin Input Current	V_{FB} = 1V		−20		20	nA
$INTV_{CC}$ Voltage	I_{LOAD} = 0mA, V_{BIAS} = 0V		3.23	3.4	3.57	V
	I_{LOAD} = 0mA, V_{BIAS} = 3.3V		3.25	3.29	3.35	V
$INTV_{CC}$ Undervoltage Lockout			2.5	2.6	2.7	V
BIAS Pin Current Consumption	V_{BIAS} = 3.3V, I_{LOAD} = 1A, 2MHz			8.5		mA
Minimum On-Time	I_{LOAD} = 1A, SYNC = 0V	●	30	50	70	ns
	I_{LOAD} = 1A, SYNC = 3.3V	●	30	45	65	ns
Minimum Off-Time			50	80	110	ns

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2

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