

## CHANGE NOTIFICATION



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

October 10, 2016

Dear Sir/Madam:

PCN#101016

**Subject: Notification of Change to LT8611 Datasheet**

Please be advised that Linear Technology Corporation has made a minor change to the LT8611 product datasheet to facilitate improvement in our manufacturing yield. The changes are shown on the attached page of the marked up datasheet. There was no change in form, fit, function, quality or reliability of the product. The product shipped after December 10, 2016 will be tested to the new limits.

Should you have any concerns, please contact me before December 10, 2016, at which time we will consider this change to be approved. Should you have any 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).

Sincerely,

Jason Hu  
Quality Assurance Engineer

**ELECTRICAL CHARACTERISTICS** The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at  $T_A = 25^\circ\text{C}$ .

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INTV <sub>CC</sub> Undervoltage Lockout		2.5	2.6	2.7	V
BIAS Pin Current Consumption	V <sub>BIAS</sub> = 3.3V, I <sub>LOAD</sub> = 1A, 2MHz		8.5		mA
Minimum On-Time	I <sub>LOAD</sub> = 1A, SYNC = 0V	● 30	50	70	ns
	I <sub>LOAD</sub> = 1A, SYNC = 3.3V	● 30	45	65	ns
Minimum Off-Time		50	80	110	ns
Oscillator Frequency	R <sub>T</sub> = 221k, I <sub>LOAD</sub> = 1A	● 180	210	240	kHz
	R <sub>T</sub> = 60.4k, I <sub>LOAD</sub> = 1A	● 665	700	735	
	R <sub>T</sub> = 18.2k, I <sub>LOAD</sub> = 1A	● 1.85	2.00	2.15	MHz
Top Power NMOS On-Resistance	V <sub>INTVCC</sub> = 3.4V, I <sub>SW</sub> = 1A		120		mΩ
Top Power NMOS Current Limit	V <sub>INTVCC</sub> = 3.4V	● 3.5	4.8	5.8	A
Bottom Power NMOS On-Resistance	V <sub>INTVCC</sub> = 3.4V, I <sub>SW</sub> = 1A		65		mΩ
Bottom Power NMOS Current Limit	V <sub>INTVCC</sub> = 3.4V	2.5	3.3	4.8	A
SW Leakage Current	V <sub>IN</sub> = 42V, V <sub>SW</sub> = 0V, 42V	-1.5		1.5	μA
EN/UV Pin Threshold	EN/UV Rising	● 0.94	1.0	1.06	V
EN/UV Pin Hysteresis			40		mV
EN/UV Pin Current	V <sub>EN/UV</sub> = 2V	-20		20	nA
PG Upper Threshold Offset from V <sub>FB</sub>	V <sub>FB</sub> Falling	● 6	9.0	12	%
PG Lower Threshold Offset from V <sub>FB</sub>	V <sub>FB</sub> Rising	● -6	-9.0	-12	%
PG Hysteresis			1.3		%
PG Leakage	V <sub>PG</sub> = 3.3V	-40		40	nA
PG Pull-Down Resistance	V <sub>PG</sub> = 0.1V	●	680	2000	Ω
SYNC Threshold	SYNC Falling	0.8	1.1	1.4	V
	SYNC Rising	1.6	2.0	2.4	V
SYNC Pin Current	V <sub>SYNC</sub> = 2V	-40		40	nA
TR/SS Source Current		● 1.2	2	3.2	μA
TR/SS Pull-Down Resistance	Fault Condition, TR/SS = 0.1V		230		Ω
Current Sense Voltage (V <sub>ISP-ISN</sub> )	V <sub>ICTRL</sub> = 1.5V, V <sub>ISN</sub> = 3.3V	● 48	50	52	mV
	V <sub>ICTRL</sub> = 1.5V, V <sub>ISN</sub> = 0V	● 46	50.5	55.5	56
	V <sub>ICTRL</sub> = 800mV, V <sub>ISN</sub> = 3.3V	● 38	41	45	46
	V <sub>ICTRL</sub> = 800mV, V <sub>ISN</sub> = 0V	● 37	42	46	47
	V <sub>ICTRL</sub> = 200mV, V <sub>ISN</sub> = 3.3V	● 5	10	14	15
	V <sub>ICTRL</sub> = 200mV, V <sub>ISN</sub> = 0V	● 4	10.5	16	17
IMON Monitor Pin Voltage	V <sub>ISP-ISN</sub> = 50mV, V <sub>ISN</sub> = 3.3V	● 0.960	1.00	1.035	1.040
	V <sub>ISP-ISN</sub> = 50mV, V <sub>ISN</sub> = 0V	● 0.890	0.99	1.000	1.090
	V <sub>ISP-ISN</sub> = 10mV, V <sub>ISN</sub> = 3.3V	● 130	220	290	320
	V <sub>ISP-ISN</sub> = 10mV, V <sub>ISN</sub> = 0V	● 110	205	290	300
ISP, ISN Pin Bias Current		● -20		20	μA

**Note 1:** Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. Exposure to any Absolute Maximum Rating condition for extended periods may affect device reliability and lifetime.

**Note 2:** The LT8611E is guaranteed to meet performance specifications from 0°C to 125°C junction temperature. Specifications over the -40°C to 125°C operating junction temperature range are assured by design, characterization, and correlation with statistical process controls. The LT8611I is guaranteed over the full -40°C to 125°C operating junction

temperature range. High junction temperatures degrade operating lifetimes. Operating lifetime is derated at junction temperatures greater than 125°C.

**Note 3:** This IC includes overtemperature protection that is intended to protect the device during overload conditions. Junction temperature will exceed 150°C when overtemperature protection is active. Continuous operation above the specified maximum operating junction temperature will reduce lifetime.