

## CHANGE NOTIFICATION



NOW PART OF



Analog Devices, Inc.  
1630 McCarthy Blvd., Milpitas CA  
(408) 432-1900

June 27, 2017

Dear Sir/Madam:

PCN#062717

**Subject: Notification of Change to LT8612 Datasheet**

Please be advised that Analog Devices, Inc. Milpitas, California has made a minor change to the LT8612 product datasheet to facilitate improvement in our manufacturing capability. The change is 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 August 27, 2017 will be tested to the new limits.

Should you have any questions or concerns please contact your local Analog Devices sales person or you may contact me at 408-432-1900 ext. 2077, or by e-mail at [JASON.HU@ANALOG.COM](mailto:JASON.HU@ANALOG.COM). If I do not hear from you by August 27, 2017, we will consider this change to be approved by your company.

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> Voltage	$I_{\text{LOAD}} = 0\text{mA}$ , $V_{\text{BIAS}} = 0\text{V}$	3.23	3.4	3.57	V
	$I_{\text{LOAD}} = 0\text{mA}$ , $V_{\text{BIAS}} = 3.3\text{V}$	3.25	3.29	3.35	V
INTV <sub>CC</sub> Undervoltage Lockout		2.4	2.6	2.8	V
BIAS Pin Current Consumption	$V_{\text{BIAS}} = 3.3\text{V}$ , $I_{\text{LOAD}} = 1\text{A}$ , 2MHz		14		mA
Minimum On-Time	$I_{\text{LOAD}} = 2\text{A}$ , SYNC = 0V	● 20	40	60	ns
	$I_{\text{LOAD}} = 2\text{A}$ , SYNC = 3.3V	● 20	35	55	ns
Minimum Off-Time		50	85	120	ns
Oscillator Frequency	$R_T = 221\text{k}$ , $I_{\text{LOAD}} = 1\text{A}$	● 180	210	240	kHz
	$R_T = 60.4\text{k}$ , $I_{\text{LOAD}} = 1\text{A}$	● 665	700	735	kHz
	$R_T = 18.2\text{k}$ , $I_{\text{LOAD}} = 1\text{A}$	● 1.85	2.00	2.15	MHz
Top Power NMOS On-Resistance	$I_{\text{SW}} = 1\text{A}$		65		mΩ
Top Power NMOS Current Limit		● 7.5	9.7	12.0	A
Bottom Power NMOS On-Resistance	$V_{\text{INTVCC}} = 3.4\text{V}$ , $I_{\text{SW}} = 1\text{A}$		29		mΩ
Bottom Power NMOS Current Limit	$V_{\text{INTVCC}} = 3.4\text{V}$	● 6	10	12	A
SW Leakage Current	$V_{\text{IN}} = 42\text{V}$ , $V_{\text{SW}} = 0\text{V}$ , 42V	-6	0.1	6	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	$V_{\text{EN/UV}} = 2\text{V}$	-20	1	20	nA
PG Upper Threshold Offset from $V_{\text{FB}}$	$V_{\text{FB}}$ Falling	● 6.5	9.0	11.5	%
PG Lower Threshold Offset from $V_{\text{FB}}$	$V_{\text{FB}}$ Rising	● -6.5	-9.0	-11.5	%
PG Hysteresis			1.3		%
PG Leakage	$V_{\text{PG}} = 3.3\text{V}$	-40		40	nA
PG Pull-Down Resistance	$V_{\text{PG}} = 0.1\text{V}$	●	680	2000	Ω
SYNC Threshold	SYNC Falling	0.7	1.0	1.4	V
	SYNC Rising	1.0	1.3	1.55	V
SYNC Pin Current	$V_{\text{SYNC}} = 2\text{V}$	-40		40	nA
TR/SS Source Current		● 1.4	2.1	-2.7	μA
TR/SS Pull-Down Resistance	Fault Condition, TR/SS = 0.1V		230		Ω

**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 LT8612E is guaranteed to meet performance specifications from  $0^\circ\text{C}$  to  $125^\circ\text{C}$  junction temperature. Specifications over the  $-40^\circ\text{C}$  to  $125^\circ\text{C}$  operating junction temperature range are assured by design, characterization, and correlation with statistical process controls. The LT8612I is guaranteed over the full  $-40^\circ\text{C}$  to  $125^\circ\text{C}$  operating junction temperature range. High junction temperatures degrade operating lifetimes. Operating lifetime is derated at junction temperatures greater than  $125^\circ\text{C}$ .

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

3.5 uA