



## Product/Process Change Notice - PCN 19\_0283 Rev. -

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This notice is to inform you of a change that will be made to certain ADI products (see Appendix A) that you may have purchased in the last 2 years. **Any inquiries or requests with this PCN (additional data or samples) must be sent to ADI within 30 days of publication date.** ADI contact information is listed below.

**PCN Title:** LT8309 Data sheet limit change.

**Publication Date:** 04-Dec-2019

**Effectivity Date:** 07-Mar-2020 *(the earliest date that a customer could expect to receive changed material)*

**Revision Description:**

Initial Release

**Description Of Change:**

Minor changes to the LT8309 product Data sheet.

**Reason For Change:**

The data sheet is being updated to accurately reflect device capabilities.

**Impact of the change (positive or negative) on fit, form, function & reliability:**

The change described above has no impact on fit, form, or functionality of the device.

**Product Identification** *(this section will describe how to identify the changed material)*

The product shipped after effectively date will be tested to the new limit.

**Summary of Supporting Information:**

Changes will be reflected on the new product data sheet revision b. See changes on Electrical Characteristics page 3.

**Supporting Documents**

**Attachment 1: Type:** Datasheet Specification Comparison

ADI\_PCN\_19\_0283\_Rev\_-\_LT8309 Data sheet PCN.pdf

**For questions on this PCN, please send an email to the regional contacts below or contact your local ADI sales representatives.**

**Americas:**  
PCN\_Americas@analog.com

**Europe:**  
PCN\_Europe@analog.com

**Japan:**  
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**Rest of Asia:**  
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**Appendix A - Affected ADI Models**

**Added Parts On This Revision - Product Family / Model Number (9)**

LT8309 / LT8309ES5#PBF	LT8309 / LT8309ES5#TRMPBF	LT8309 / LT8309ES5#TRPBF	LT8309 / LT8309HS5#PBF	LT8309 / LT8309HS5#TRMPBF
LT8309 / LT8309HS5#TRPBF	LT8309 / LT8309IS5#PBF	LT8309 / LT8309IS5#TRMPBF	LT8309 / LT8309IS5#TRPBF	

**Appendix B - Revision History**

<b>Rev</b>	<b>Publish Date</b>	<b>Effectivity Date</b>	<b>Rev Description</b>
Rev. -	04-Dec-2019	07-Mar-2020	Initial Release

Analog Devices, Inc.

DocId:7912 Parent DocId:None Layout Rev:7

**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
Input Voltage Range		●	4.5		40	V
$V_{CC}$ Quiescent Current	Not Switching, $INTV_{CC} = 8\text{V}$			300	345	$\mu\text{A}$
<b>Comparator</b>						
Turn-On Threshold	$R_S = 0\Omega$	●	<del>-89</del> <sup>-73</sup>	-57	-45	mV
Turn-Off Threshold	$R_S = 0\Omega$	●	17	21	25	mV
			16		28	mV
Drain Voltage Latch Reset	$R_S = 0\Omega$			1.21		V
Minimum Off-Time			75	95	115	ns
Minimum On-Time			310	360	410	ns
Drain Current	Out of Pin	●	9.5	10	10.5	$\mu\text{A}$
<b>INTV<sub>CC</sub> Linear Regulator</b>						
INTV <sub>CC</sub> Quiescent Current	Not Switching, $INTV_{CC} = 8\text{V}$			<del>100</del> <sup>115</sup>	<del>117</del> <sup>138</sup>	$\mu\text{A}$
INTV <sub>CC</sub> Voltage Range			4.5		10	V
INTV <sub>CC</sub> Regulation Voltage		●	6.8	7	7.2	V
INTV <sub>CC</sub> UVLO					4.03	V
Dropout ( $V_{CC}$ to $INTV_{CC}$ )	$I_{INTV_{CC}} = -10\text{mA}$ , $V_{IN} = 7\text{V}$		1	1.3	1.6	V
Current Limit		●	30	42	55	mA
<b>Gate Driver</b>						
Turn-On Propagation Delay ( $t_{D(ON)}$ )	$R_S = 0\Omega$ , $-100\text{mV}_{OD}$ , $V_{DS}$ to $V_{GATE}$			31	40	ns
Turn-Off Propagation Delay ( $t_{D(OFF)}$ )	$R_S = 0\Omega$ , $-100\text{mV}_{OD}$ , $V_{DS}$ to $V_{GATE}$			26	36	ns
$t_r$ GATE Driver Output Rise Time	$C_L = 3300\text{pF}$			21		ns
$t_f$ GATE Driver Output Fall Time	$C_L = 3300\text{pF}$			11		ns
Pull-Up Resistance				2.7		$\Omega$
Pull-Down Resistance				0.8		$\Omega$

**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 LT8309E is guaranteed to meet performance specifications from  $0^\circ\text{C}$  to  $125^\circ\text{C}$  operating 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 LT8309I is guaranteed over the full  $-40^\circ\text{C}$  to  $125^\circ\text{C}$  operating junction

temperature range. The LT8309H is guaranteed over the full  $-40^\circ\text{C}$  to  $150^\circ\text{C}$  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:** The LT8309 includes overtemperature protection that is intended to protect the device during momentary overload conditions. Junction temperature will exceed  $150^\circ\text{C}$  when overtemperature protection is active. Continuous operation above the specified maximum operating junction temperature may impair device reliability.