

# CHANGE NOTIFICATION



Analog Devices, Inc.  
1630 McCarthy Blvd., Milpitas CA  
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August 06, 2018

PCN#080618

Dear Sir/Madam:

**Subject: Notification of Change to LTC4362-1, LTC4362-2 Datasheet**

Please be advised that Analog Devices, Inc. Milpitas, California has made a minor change to the LTC4362-1, LTC4362-2 product datasheet to facilitate improvement in our manufacturing capability. 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 October 06, 2018 will be tested to the new limits.

Should you have any questions or concerns please contact your local Analog Devices sales representatives 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 October 06, 2018, we will consider this change to be approved by your company.

Sincerely,

Jason Hu  
Quality Assurance Engineer

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

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new parameter

## LTC4362-1/LTC4362-2

**ELECTRICAL CHARACTERISTICS** The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at  $T_A = 25^\circ\text{C}$ .  $V_{IN} = 5\text{V}$ ,  $V_{ON} = 0\text{V}$  unless otherwise noted.

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
<b>Supplies</b>							
$V_{IN}$	Input Voltage Range		●	2.5	28	V	
$V_{IN(UVL)}$	Input Undervoltage Lockout	$V_{IN}$ Rising	●	1.8	2.1	2.45	V
$I_{IN}$	Input Supply Current	$V_{ON} = 0\text{V}$ $V_{ON} = 2.5\text{V}$	●	220	400	$\mu\text{A}$	
			●	1.5	10	$\mu\text{A}$	
<b>Thresholds</b>							
$V_{IN(OV)}$	IN Pin Overvoltage Threshold	$V_{IN}$ Rising	●	5.684	5.8	5.916	V
$V_{IN(OVL)}$	IN Pin Overvoltage Recovery Threshold	$V_{IN}$ Falling	●	5.51	5.7	5.85	V
$\Delta V_{OV}$	Overvoltage Hysteresis		●	25	100	200	mV
					300		
<b>Input Pins</b>							
$V_{ON(TH)}$	$\overline{\text{ON}}$ Input Threshold		●	0.4	1.5	V	
$I_{\overline{\text{ON}}}$	$\overline{\text{ON}}$ Pull-Down Current	$V_{\overline{\text{ON}}} = 2.5\text{V}$	●	2.5	5	10	$\mu\text{A}$
<b>Output Pins</b>							
$V_{OUT(UP)}$	OUT Turn-On Ramp-Rate	$V_{OUT} = 0.5\text{V}$ to $4\text{V}$	●	1.5	3	4.5	V/ms
$I_{OUT}$	OUT Leakage Current	$V_{\overline{\text{ON}}} = 2.5\text{V}$ , $V_{OUT} = 5\text{V}$	●	0	$\pm 3$	$\mu\text{A}$	
$V_{GATEP(CLP)}$	IN to GATEP Clamp Voltage	$V_{IN} = 8\text{V}$ to $28\text{V}$	●	5	5.8	7.5	V
$R_{GATEP}$	GATEP Pull-Down Resistance	$V_{GATEP} = 3\text{V}$	●	0.8	2	3.2	$\text{M}\Omega$
$V_{PWRGD(OL)}$	PWRGD Output Low Voltage	$V_{IN} = 5\text{V}$ , $I_{PWRGD} = 3\text{mA}$	●	0.23	0.4	V	
$R_{PWRGD}$	PWRGD Pull-Up Resistance to OUT	$V_{IN} = 6.5\text{V}$ , $V_{PWRGD} = 1\text{V}$	●	250	500	800	$\text{k}\Omega$
<b>Internal N-Channel MOSFET</b>							
$R_{ON}$	On Resistance	$I_{OUT} = 0.5\text{A}$	●	40	70	$\text{m}\Omega$	
$I_{TRIP}$	Overcurrent Threshold		●	1.2	1.5	1.8	A
$I_{AS}$	Peak Avalanche Current	$L = 0.1\text{mH}$ (Note 5)		10		A	
$E_{AS}$	Single Pulse Avalanche Energy	$I_{AS} = 10\text{A}$ , $L = 0.1\text{mH}$ (Note 5)		10		mJ	
<b>Delay</b>							
$t_{ON}$	Turn-On Delay	$V_{IN}$ High to $V_{OUT} = 0.5\text{V}$ , $R_{OUT} = 1\text{k}\Omega$	●	50	130	200	ms
$t_{OFF(OV)}$	Turn-Off Delay for Overvoltage	$V_{IN} = 5\text{V}$ $\downarrow$ $6.5\text{V}$ to $V_{OUT} = 4.5\text{V}$ , $R_{OUT} = 1\text{k}\Omega$	●		0.45	1	$\mu\text{s}$
$t_{OFF(OC)}$	Turn-Off Delay for Overcurrent	$I_{OUT} = 0.5\text{A}$ $\downarrow$ $3\text{A}$ to $V_{OUT} = 4.5\text{V}$	●	5	10	20	$\mu\text{s}$
$t_{PWRGD(LH)}$	PWRGD Rising Delay	$V_{IN} = 5\text{V}$ $\downarrow$ $6.5\text{V}$ to PWRGD High	●		0.3	1	$\mu\text{s}$
$t_{PWRGD(HL)}$	PWRGD Falling Delay	$V_{IN} = 0\text{V}$ $\downarrow$ $5\text{V}$ , $V_{OUT} = 0.5\text{V}$ to PWRGD Low, $R_{OUT} = 1\text{k}\Omega$	●	25	65	100	ms
$t_{\overline{\text{ON}}(\text{OFF})}$	$\overline{\text{ON}}$ High to N-channel MOSFET Off	$V_{\overline{\text{ON}}} = 0\text{V}$ $\downarrow$ $2.5\text{V}$	●		40	100	$\mu\text{s}$
<b>ESD Protection</b>							
	ESD Protection for IN to GND	$C_{OUT} = 1\mu\text{F}$ , Human Body Model			$\pm 25$	kV	

**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:** All currents into device pins are positive; all currents out of device pins are negative. All voltages are referenced to GND unless otherwise specified.

**Note 3:** The minimum drain-source breakdown voltage of the internal MOSFET is 28V. Driving the IN and SENSE pins more than 28V above OUT may damage the device if the  $E_{AS}$  capability of the MOSFET is exceeded.

**Note 4:** An internal current sense resistor ties IN and SENSE. Driving SENSE relative to IN may damage the resistor.

**Note 5:** The  $I_{AS}$  and  $E_{AS}$  typical values are based on characterization and are not production tested.

Rev B

For more information [www.analog.com](http://www.analog.com)

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