

CHANGE NOTIFICATION



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

April 09, 2014

Dear Sir/Madam:

PCN# 040914

Subject: Notification of Change to LT3581 Datasheet

Please be advised that Linear Technology Corporation has made a minor change to the LT3581 product datasheet to facilitate improvement in our manufacturing yield. We have changed the condition for the FAULT Output Voltage Low spec for pull-up current to 50uA from 100uA. By lowering the pull-up current, the typical voltage was changed from 150mV to 100mV to meet datasheet specification consistently without losing yield. A redlined datasheet characteristics table is attached.

Product shipped after June 10, 2014 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 email at JASON.HU@LINEAR.COM. If I do not hear from you by June 10, 2014, 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 $T_A = 25^\circ\text{C}$. $V_{IN} = 5\text{V}$, $V_{\overline{\text{SHDN}}} = V_{IN}$, $V_{\overline{\text{FAULT}}} = V_{IN}$, unless otherwise noted. (Note 2).

PARAMETER	CONDITIONS		MIN	TYP	MAX	UNITS
Soft-Start Charge Current	$V_{SS} = 30\text{mV}$, Current Flows Out of SS pin	●	5.7	8.7	11.3	μA
Soft-Start Discharge Current	Part in FAULT, $V_{SS} = 2.1\text{V}$, Current Flows into SS Pin	●	5.7	8.7	11.3	μA
Soft-Start High Detection Voltage	Part in FAULT	●	1.65	1.8	1.95	V
Soft-Start Low Detection Voltage	Part Exiting FAULT	●	30	50	85	mV
$\overline{\text{SHDN}}$ Minimum Input Voltage High	Active Mode, $\overline{\text{SHDN}}$ Rising (LT3581E, LT3581I)	●	1.27	1.33	1.41	V
	Active Mode, $\overline{\text{SHDN}}$ Rising (LT3581H)	●	1.27	1.33	1.44	V
	Active Mode, $\overline{\text{SHDN}}$ Falling (LT3581E, LT3581I, LT3581H)	●	1.24	1.3	1.38	V
$\overline{\text{SHDN}}$ Input Voltage Low	Shutdown Mode	●			0.3	V
$\overline{\text{SHDN}}$ Pin Bias Current	$V_{\overline{\text{SHDN}}} = 3\text{V}$		9.7	40	60	μA
	$V_{\overline{\text{SHDN}}} = 1.3\text{V}$			11.4	13.4	μA
	$V_{\overline{\text{SHDN}}} = 0\text{V}$			0	0.1	μA
CLKOUT Output Voltage High	$C_{\text{CLKOUT}} = 50\text{pF}$		1.9	2.1	2.3	V
CLKOUT Output Voltage Low	$C_{\text{CLKOUT}} = 50\text{pF}$			5	200	mV
CLKOUT Duty Cycle	$T_J = 25^\circ\text{C}$			42		%
CLKOUT Rise Time	$C_{\text{CLKOUT}} = 50\text{pF}$			12		ns
CLKOUT Fall Time	$C_{\text{CLKOUT}} = 50\text{pF}$			8		ns
GATE Pull Down Current	$V_{\text{GATE}} = 3\text{V}$ (LT3581E, LT3581I)	●	800	933	1100	μA
	$V_{\text{GATE}} = 3\text{V}$ (LT3581H)	●	700	900	1100	μA
	$V_{\text{GATE}} = 80\text{V}$ (LT3581E, LT3581I, LT3581H)	●	800	933	1100	μA
GATE Leakage Current	$V_{\text{GATE}} = 50\text{V}$, GATE Off			0.01	1	μA
$\overline{\text{FAULT}}$ Output Voltage Low	$50\mu\text{A}$ into $\overline{\text{FAULT}}$ Pin (LT3581E, LT3581I)	●	100	150	300	mV
	$50\mu\text{A}$ into $\overline{\text{FAULT}}$ Pin (LT3581H)	●	100	150	400	mV
$\overline{\text{FAULT}}$ Leakage Current	$V_{\overline{\text{FAULT}}} = 40\text{V}$, $\overline{\text{FAULT}}$ Off			0.01	1	μA
$\overline{\text{FAULT}}$ Input Voltage Low		●	700	750	800	mV
$\overline{\text{FAULT}}$ Input Voltage High		●	950	1000	1050	mV

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 LT3581E is guaranteed to meet performance specifications from 0°C to 125°C . Specifications over the -40°C to 125°C junction temperature range are assured by design, characterization and correlation with statistical process controls. The LT3581I is guaranteed over the full -40°C to 125°C operating junction temperature range. The LT3581H is

guaranteed over the full -40°C to 150°C operating junction temperature range. Operating lifetime is derated at junction temperatures greater than 125°C .

Note 3: Current limit guaranteed by design and/or correlation to static test.

Note 4: This IC includes overtemperature protection that is intended to protect the device during momentary overload conditions. Junction temperature will exceed 150°C when overtemperature protection is active. Continuous operation over the specified maximum operating junction temperature may impair device reliability.