CHANGE NOTIFICATION

LT LINEAR TECHNOLOGY

Linear Technology Corporation
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March 09, 2017

Dear Sir/Madam: PCN#030917

Subject: Notification of Change to LT3761, LT3761-1 Datasheet

Please be advised that Linear Technology Corporation has made a minor change to the LT3761, LT3761-1 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 May 09, 2017 will be tested to the new limits.

Should you have any concerns, please contact me before May 09, 2017, 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.

Sincerely,

Jason Hu
Quality Assurance Engineer

ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at $T_A = 25°C$. $V_{IN} = 24V$, EN/UVLO = 24V, CTRL = 2V, PWM = 5V, unless otherwise noted.

PARAMETER	CONDITIONS		MIN	TYP	MAX	UNITS
Error Amplifier						
Full-Scale ISP/ISN Current Sense Threshold ($V_{ISP-ISN}$)	CTRL ≥ 1.2V, ISP = 48V CTRL ≥ 1.2V, ISN = 0V	● ●	242 243	250 257	258 268	mV mV
1/10th Scale ISP/ISN Current Sense Threshold ($V_{ISP-ISN}$)	CTRL = 0.2V, ISP = 48V CTRL = 0.2V, ISN = 0V	● ●	21 ~~20~~ 17	25 28	30 ~~36~~ 39	mV mV
Mid-Scale ISP/ISN Current Sense Threshold ($V_{ISP-ISN}$)	CTRL = 0.5V, ISP = 48V CTRL = 0.5V, ISN = 0V	● ●	96 95	100 105	104 115	mV mV
ISP/ISN Overcurrent Threshold				600		mV
ISP/ISN Current Sense Amplifier Input Common Mode Range (V_{ISN})			0		80	V
ISP/ISN Input Bias Current High Side Sensing (Combined)	PWM = 5V (Active), ISP = ISN = 48V PWM = 0V (Standby), ISP = ISN = 48V			100 0.1		μA μA
ISP/ISN Input Bias Current Low Side Sensing (Combined)	PWM = 5V, ISP = ISN = 0V			−230		μA
ISP/ISN Current Sense Amplifier g_m (High Side Sensing)	$V_{ISP-ISN}$ = 250mV, ISP = 48V			120		μS
ISP/ISN Current Sense Amplifier g_m (Low Side Sensing)	$V_{ISP-ISN}$ = 250mV, ISN = 0V			70		μS
CTRL Pin Range for Linear Current Sense Threshold Adjustment		●	0		1.0	V
CTRL Input Bias Current	Current Out of Pin			50	100	nA
V_C Output Impedance	0.9V ≤ V_C ≤ 1.5V			15		MΩ
V_C Standby Input Bias Current	PWM = 0V		−20		20	nA
FB Regulation Voltage (V_{FB})	ISP = ISN = 48V, 0V	●	1.225	1.255	1.275	V
FB Amplifier g_m	FB = V_{FB}, ISP = ISN = 48V			500		μS
FB Pin Input Bias Current	Current Out of Pin, FB = V_{FB}			40	100	nA
FB Open LED Threshold	OPENLED Falling, ISP Tied to ISN (LT3761 Only)	●	V_{FB} − 65mV	V_{FB} − 50mV	V_{FB} − 40mV	V
C/10 Inhibit for OPENLED Assertion ($V_{ISP-ISN}$)	FB = V_{FB}, ISN = 48V, 0V (LT3761 Only)		14	25	39	mV
FB Overvoltage Threshold	PWMOUT Falling		V_{FB} + 50mV	V_{FB} + 60mV	V_{FB} + ~~70mV~~ 75mV	V
V_C Current Mode Gain ($\Delta V_{VC}/\Delta V_{SENSE}$)				4		V/V
Oscillator						
Switching Frequency	R_T = 95.3kΩ R_T = 8.87kΩ	●	85 925	100 1000	115 1050	kHz kHz
GATE Minimum Off-Time	C_{GATE} = 2200pF			160		ns
GATE Minimum On-Time	C_{GATE} = 2200pF			180		ns
SYNC Pin Resistance to GND	3761-1 Only			30		kΩ
SYNC Input High	3761-1 Only		1.5			V
SYNC Input Low	3761-1 Only				0.4	V
Linear Regulator						
$INTV_{CC}$ Regulation Voltage	10V ≤ V_{IN} ≤ 60V	●	7.6	7.85	8.05	V
$INTV_{CC}$ Maximum Operating Voltage			8.1			V
$INTV_{CC}$ Minimum Operating Voltage					4.5	V
Dropout ($V_{IN} − INTV_{CC}$)	I_{INTVCC} = −10mA, V_{IN} = 7V			390		mV

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