

CHANGE NOTIFICATION



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

April 19, 2013

Dear Sir/Madam:

PCN# 041913

Subject: Notification of Change to LTC3112 Datasheet

Please be advised that Linear Technology Corporation has made a minor change to the LTC3112 specification in order to improve device manufacturability. The maximum value for the RUN pin input threshold has been increased from 1.2V to 1.5V. No other functional or parametric specifications are affected. A redlined datasheet characteristics table is attached.

Product with a data code of 1322 and after will be tested to the new limit.

Should you have any further questions, please feel free to contact me at 408-432-1900 ext. 2519, or by email at NGIRN@LINEAR.COM. If I do not hear from you by May 20th, 2013, we will consider this change to be approved by your company.

Sincerely,

Naib Girm
Quality Assurance Manager

ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full operating junction temperature range, otherwise specifications are at $T_A = 25^\circ\text{C}$ (Note 2). $V_{IN} = V_{OUT} = \text{PWM/SYNC} = \text{RUN} = 5\text{V}$ unless otherwise noted.

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
Input Operating Range	0°C to 125°C –40°C to 0°C	2.7		15	V	
		2.85		15	V	
V_{IN} UVLO Threshold	Rising	2.0	2.3	2.7	V	
V_{IN} UVLO Hysteresis			300		mV	
V_{CC} UVLO Threshold	Rising	● 2.2	2.35	2.5	V	
V_{CC} UVLO Hysteresis			150		mV	
Output Voltage Adjust Range		● 2.5		14	V	
INTV _{CC} Clamp Voltage	$V_{IN} = 5\text{V}$ or 15V	● 3.8	4.2	4.6	V	
V_{CC} Voltage in Dropout	$V_{IN} = 2.7\text{V}$, $I_{VCC} = 10\text{mA}$		2.6		V	
Quiescent Current – Burst Mode Operation	$V_{FB} = 1\text{V}$, $V_{\text{PWM/SYNC}} = 0\text{V}$		50	75	μA	
Quiescent Current – Shutdown	$\text{RUN} = V_{OUT} = V_{CC} = 0\text{V}$, Not Including Switch Leakage		0	1	μA	
Feedback Voltage = PWM Mode Operation		● 0.778	0.8	0.818	V	
Feedback Leakage	$V_{FB} = 0.8\text{V}$		0	50	nA	
OVP Threshold	Rising Threshold	0.78	0.83	0.88	V	
OVP Hysteresis	Measured at OVP Pin		20		mV	
OVP Leakage	$\text{OVP} = 0.8\text{V}$		0	100	nA	
NMOS Switch Leakage	Switch A, B, C, D, $V_{IN} = V_{OUT} = 12\text{V}$		1	10	μA	
NMOS Switch On Resistance	Switch A		40		mΩ	
NMOS Switch On Resistance	Switch B, C		50		mΩ	
NMOS Switch On Resistance	Switch D		60		mΩ	
Input Current Limit	$L = 4.7\mu\text{H}$	● 4.5	6	8.5	A	
Peak Current Limit	$L = 4.7\mu\text{H}$		7	10	12	A
Burst Current Limit	$L = 4.7\mu\text{H}$		0.7	1.3	2	A
Burst Zero Current Threshold	$L = 4.7\mu\text{H}$			0.3		A
Reverse Current Limit	$L = 4.7\mu\text{H}$		–0.5	–1	–1.5	A
I_{OUT} Accuracy (Note 5)	SW2 to V_{OUT} Current = 1.5A SW2 to V_{OUT} Current = 1.0A SW2 to V_{OUT} Current = 0.5A	32	36	40	μA	
		20	24	28	μA	
		8	12	16	μA	
Maximum Duty Cycle	Buck (Switch A On)	● 80	87		%	
	Boost (Switch C On)	● 75	82		%	
Minimum Duty Cycle	Buck (Switch A On)	●		0	%	
	Boost (Switch C On)	● 5	12		%	
Frequency	$\text{PWM/SYNC} = 5\text{V}$, $V_{IN} = V_{OUT} = 12\text{V}$	● 675	750	825	kHz	
SYNC Frequency Range (Note 7)		● 300		1500	kHz	
PWM/SYNC Threshold	$V_{CC} = 2.7\text{V}$ or 5V	● 0.5	0.9	1.5	V	
RUN Threshold	$V_{IN} = 2.7\text{V}$ or 15V	● 0.35	0.75	1.5	V	