CHANGE NOTIFICATION

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

February 10, 2015

Dear Sir/Madam: PCN# 021015

Subject: Notification of Change to LTC4232 Datasheet

Please be advised that Linear Technology Corporation has made a minor change to the LTC4232 product datasheet to facilitate improvement in our manufacturing yield. The change is shown on the attached page of the marked up datasheet. There was no change made to the die. The product shipped after April 13, 2015 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 e-mail at JASON.HU@linear.com. If I do not hear from you by April 13, 2015, we will consider this change approved by your company.

Sincerely,

Jason Hu
Quality Assurance Engineer

ELECTRICAL CHARACTERISTICS

The ● denotes those specifications which apply over the full operating temperature range, otherwise specifications are at T_A = 25°C. V_{DD} = 12V unless otherwise noted.

SYMBOL	PARAMETER	CONDITIONS		MIN	TYP	MAX	UNITS
Inputs							
I_{IN}	OV, UV, FB Pin Input Current	V = 1.2V	●		0	±1	µA
V_{TH}	OV, UV, FB Pin Threshold Voltage	V_{PIN} Rising	●	1.21	1.235	1.26	V
$\Delta V_{OV(HYST)}$	OV Pin Hysteresis		●	10	20	30	mV
$\Delta V_{UV(HYST)}$	UV Pin Hysteresis		●	50	80	110	mV
$V_{UV(RTH)}$	UV Pin Reset Threshold Voltage	V_{UV} Falling	●	0.55	0.62	0.7	V
$\Delta V_{FB(HYST)}$	FB Pin Power Good Hysteresis		●	10	20	30	mV
R_{ISET}	I_{SET} Pin Output Resistor		●	19	20	21	kΩ
Outputs							
V_{INTVCC}	$INTV_{CC}$ Output Voltage	V_{DD} = 5V, 15V, I_{LOAD} = 0mA, –10mA	●	2.8	3.1	3.3	V
V_{OL}	PG, $\overline{FLT}$ Pin Output Low Voltage	I = 2mA	●		0.4	0.8	V
I_{OH}	PG, $\overline{FLT}$ Pin Input Leakage Current	V = 30V	●		0	±10	µA
$V_{TIMER(H)}$	TIMER Pin High Threshold	V_{TIMER} Rising	●	1.2	1.235	1.28	V
$V_{TIMER(L)}$	TIMER Pin Low Threshold	V_{TIMER} Falling	●	0.1	0.21	0.3	V
$I_{TIMER(UP)}$	TIMER Pin Pull-Up Current	V_{TIMER} = 0V	●	–80	–100	–120	µA
$I_{TIMER(DN)}$	TIMER Pin Pull-Down Current	V_{TIMER} = 1.2V	●	1.4	2	2.6	µA
$I_{TIMER(RATIO)}$	TIMER Pin Current Ratio $I_{TIMER(DN)}/I_{TIMER(UP)}$		●	1.6	2	2.7	%
A_{IMON}	I_{MON} Pin Current Gain	I_{OUT} = 2.5A	●	18.5	20	21.5	µA/A
$I_{OFF(IMON)}$	I_{MON} Pin Offset Current	I_{OUT} = 150mA	●		0	±4.5	µA
$I_{GATE(UP)}$	Gate Pull-Up Current	Gate Drive On, V_{GATE} = V_{OUT} = 12V	●	–18	–24	–29	µA
$I_{GATE(DN)}$	Gate Pull-Down Current	Gate Drive Off, V_{GATE} = 18V, V_{OUT} = 12V	●	180	250	400 ~~340~~	µA
$I_{GATE(FST)}$	Gate Fast Pull-Down Current	Fast Turn Off, V_{GATE} = 18V, V_{OUT} = 12V			140		mA
AC Characteristics							
$t_{PHL(GATE)}$	Input High (OV), Input Low (UV) to Gate Low Propagation Delay	V_{GATE} < 16.5V Falling	●		8	10	µs
$t_{PHL(ILIM)}$	Short-Circuit to Gate Low	V_{FB} = 0, Step I_{SENSE} to 6A, V_{GATE} < 15V Falling	●		1	5	µs
$t_{D(ON)}$	Turn-On Delay	Step V_{UV} to 2V, V_{GATE} > 13V	●	50	100	150	ms
$t_{D(CB)}$	Circuit Breaker Filter Delay Time (Internal)	V_{FB} = 0V, Step I_{SENSE} to 3A	●	1.3	2	2.7	ms
$t_{D(AUTO-RETRY)}$	Auto-Retry Turn-On Delay (Internal)		●	50	100	150	ms

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 pins are positive, all voltages are referenced to GND unless otherwise specified.

Note 3: An internal clamp limits the GATE pin to a maximum of 6.5V above OUT. Driving this pin to voltages beyond the clamp may damage the device.

Note 4: This IC includes overtemperature protection that is intended to protect the device during momentary overload conditions. Junction temperature will exceed 125°C when overtemperature protection is active. Continuous operation above the specified maximum operating junction temperature may impair device reliability.

Note 5: T_J is calculated from the ambient temperature, T_A, and power dissipation, P_D, according to the formula:

$T_J = T_A + (P_D \bullet 46°C/W)$