

CHANGE NOTIFICATION



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

July 16, 2014

Dear Sir/Madam:

PCN# 071614

Subject: Notification of Change to LTC4218 Datasheet

Please be advised that Linear Technology Corporation has made a change to the LTC4218 specification in order to improve device manufacturability. The maximum limit of External N-channel Gate Pull-Down Current is being increased to 400 μ A from 340 μ A as shown in the attached redlined electrical characteristics table. There were no changes to the die, and all other functional and parametric specifications are unchanged. Product shipped after September 16, 2014 will be tested to the new limit.

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 September 16, 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 $T_A = 25^\circ\text{C}$. $V_{DD} = 12\text{V}$ unless otherwise noted.

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
DC Characteristics							
V_{DD}	Input Supply Range		●	2.9	26.5	V	
I_{DD}	Input Supply Current	FET On	●	1.6	5	mA	
$V_{DD(UVL)}$	Input Supply Undervoltage Lockout	V_{DD} Rising	●	2.65	2.73	2.85	V
$V_{DD(UVTH)}$	Input Supply Undervoltage Threshold	LTC4218-12 Only V_{DD} Rising	●	9.6	9.88	10.2	V
$\Delta V_{DD(UVHYST)}$	Input Supply Undervoltage Hysteresis	LTC4218-12 Only	●	520	640	760	mV
$V_{DD(OVTH)}$	Input Supply Overvoltage Threshold	LTC4218-12 Only V_{DD} Rising	●	14.7	15.05	15.4	V
$\Delta V_{DD(OVHYST)}$	Input Supply Overvoltage Hysteresis	LTC4218-12 Only	●	183	244	305	mV
$V_{SOURCE(PGTH)}$	SOURCE Power Good Threshold	LTC4218-12 Only V_{SOURCE} Rising	●	10.2	10.5	10.8	V
$\Delta V_{SOURCE(PGHYST)}$	SOURCE Power Good Hysteresis	LTC4218-12 Only	●	127	170	213	mV
$\Delta V_{SNS(TH)}$	Current Limit Sense Voltage Threshold ($V_{SENSE^+} - V_{SENSE^-}$)	$V_{FB} = 1.23\text{V}$ $V_{FB} = 0\text{V}$ $V_{FB} = 1.23\text{V}$, $R_{SET} = 20\text{k}\Omega$	●	14.25	15	15.75	mV
			●	2.8	3.75	4.7	mV
			●	6.7	7.5	8.325	mV
$I_{SENSE^- (IN)}$	SENSE ⁻ Pin Input Current	$V_{SENSE^-} = 12\text{V}$	●	4	± 10	μA	
$I_{SENSE^+ (IN)}$	SENSE ⁺ Pin Input Current	$V_{SENSE^+} = 12\text{V}$	●	5.5	± 20	μA	
ΔV_{GATE}	External N-Channel Gate Drive ($V_{GATE} - V_{SOURCE}$)	$V_{DD} = 2.9\text{V}$ to 26.5V (Note 3) $I_{GATE} = 0$, $-1\mu\text{A}$	●	5	6.15	6.5	V
$\Delta V_{GATE-HIGH(TH)}$	Gate High Threshold ($V_{GATE} - V_{SOURCE}$)		●	3.5	4.2	4.8	V
$I_{GATE(UP)}$	External N-Channel Gate Pull-Up Current	Gate Drive On, $V_{GATE} = V_{SOURCE} = 12\text{V}$	●	-19	-24	-29	μA
$I_{GATE(FST)}$	External N-Channel Gate Fast Pull-Down Current	Fast Turn Off, $V_{GATE} = 18\text{V}$, $V_{SOURCE} = 12\text{V}$	●	100	170	220	mA
$I_{GATE(DN)}$	External N-Channel Gate Pull-Down Current	Gate Drive Off, $V_{GATE} = 18\text{V}$, $V_{SOURCE} = 12\text{V}$	●	200	250	300	μA
Inputs							
I_{IN}	OV, UV, FB Pin Input Current	$V_{IN} = 1.2\text{V}$, LTC4218 Only	●	0	± 1	μA	
R_{IN}	OV, UV, FB Pin Input Resistance	LTC4218-12 Only	●	13	18	23	$\text{k}\Omega$
$V_{(TH)}$	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_{SET}	I_{SET} Pin Internal Resistor		●	19.5	20	20.5	$\text{k}\Omega$
I_{SOURCE}	SOURCE Pin Input Current	$V_{SOURCE} = V_{GATE} = 12\text{V}$, LTC4218-12 Only $V_{SOURCE} = V_{GATE} = 12\text{V}$, LTC4218 Only $V_{SOURCE} = V_{GATE} = 0\text{V}$	●	50	70	90	μA
			●	1	2	4	μA
			●	0	± 1	μA	
Outputs							
V_{INTVCC}	INTV _{CC} Output Voltage	$I_{LOAD} = 0\text{mA}$, 10mA		3.1		V	
V_{OL}	PG, FLT Pin Output Low Voltage	$I = 2\text{mA}$	●	0.4	0.8	V	
I_{OH}	PG, FLT Pin Input Leakage Current	$V = 30\text{V}$	●	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	$V_{TIMER} = 0\text{V}$	●	-80	-100	-120	μA
$I_{TIMER(DN)}$	TIMER Pin Pull-Down Current	$V_{TIMER} = 1.2\text{V}$	●	1.4	2	2.6	μA

Used to be 340uA, now changed to 400uA