

CHANGE NOTIFICATION



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

October 22, 2015

Dear Sir/Madam:

PCN#102215

Subject: Notification of Change to LT3799, LT3799-1 Datasheet

Please be advised that Linear Technology Corporation has made a minor change to the LT3799 and LT3799-1 product datasheets to facilitate improvement in our manufacturing yield. The changes are shown on the attached pages of the marked up datasheet. There was no change made to the die. The product shipped after December 22, 2015 will be tested to the new limits.

Should you have any further 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. If I do not hear from you by December 22, 2015, 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 $T_A = 25^\circ\text{C}$. $V_{IN} = 18\text{V}$, unless otherwise noted.

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
FB Pin Bias Current	(Note 3), $FB = 1\text{V}$		100	600	nA
CTRL1/CTRL2/CTRL3 Pin Bias Current	CTRL/CTRL2/CTRL3 = 1V			±25	nA
Maximum SENSE Current Limit Threshold		96	100	106	mV
SENSE Input Bias Current	Current Out of Pin, $SENSE = 0\text{V}$		15		μA
Current Loop Voltage Gain	$\Delta V_{CTRL}/\Delta V_{SENSE}$, 1000pF Cap from COMP+ to COMP-		21		V/V
CT Pin Charge Current			10		μA
CT Pin Discharge Current			200		nA
CT Pin Low Threshold	Falling Threshold		240		mV
CT Pin High Threshold	Rising Threshold		1.25		V
CT Pin Low Hysteresis			100		mV
FB Pin High Threshold		1.22	1.25	1.29	V
DCM Current Turn-On Threshold	Current Out of Pin		45		μA
Maximum Oscillator Frequency	COMP+ = 1.2V, $V_{IN_SENSE} = 1\text{V}$		300		kHz
Minimum Oscillator Frequency	COMP+ = 0V, V_{IN_SENSE}		25		kHz
Back-Up Oscillator Frequency			20		kHz
Linear Regulator					
INTV _{CC} Regulation Voltage		9.8	10	10.4	V
Dropout ($V_{IN} - \text{INTV}_{CC}$)	INTV _{CC} = -10mA; Below V_{IN} Turn-Off Voltage		750	1150	mV
Current Limit	Below Undervoltage Threshold Change to 12		15	25	mA
Current Limit	Above Undervoltage Threshold	80	120		mA
Gate Driver					
t _r GATE Driver Output Rise Time	$C_L = 3300\text{pF}$, 10% to 90%		20		ns
t _f GATE Driver Output Fall Time	$C_L = 3300\text{pF}$, 90% to 10%		20		ns
GATE Output Low (V_{OL})				0.05	V
GATE Output High (V_{OH})			INTV _{CC} - 0.05		V

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 LT3799E is guaranteed to meet performance specifications from 0°C to 125°C junction temperature. Specifications over the -40°C

to 125°C operating junction temperature range are assured by design, characterization and correlation with statistical process controls. The LT3799I is guaranteed to meet performance specifications from -40°C to 125°C operating junction temperature.

Note 3: Current flows out of the FB pin.

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PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
FB Pin Bias Current	(Note 3), $\text{FB} = 1\text{V}$		100	600	nA
CTRL1/CTRL2/CTRL3 Pin Bias Current	CTRL1/CTRL2/CTRL3 = 1V			±25	nA
Max SENSE Current Limit Threshold		96	100	106	mV
SENSE Input Bias Current	Current Out of Pin, $\text{SENSE} = 0\text{V}$		15		μA
Current Loop Voltage Gain	$\Delta V_{\text{CTRL}}/\Delta V_{\text{SENSE}}$, 1000pF Cap from COMP+ to COMP-		21		V/V
CT Pin Charge Current			10		μA
CT Pin Discharge Current			200		nA
CT Pin Low Threshold	Falling Threshold		240		mV
CT Pin High Threshold	Rising Threshold		1.25		V
CT Pin Low Hysteresis			100		mV
FB Pin High Threshold		1.22	1.25	1.29	V
DCM Current Turn-On Threshold	Current Out of Pin		45		μA
Maximum Oscillator Frequency	COMP+ = 1.2V, $V_{\text{IN_SENSE}} = 1\text{V}$		300		kHz
Minimum Oscillator Frequency	COMP+ = 0V, $V_{\text{IN_SENSE}}$		25		kHz
Back-Up Oscillator Frequency			20		kHz

Linear Regulator

INTV _{CC} Regulation Voltage		9.8	10	10.4	V
Dropout ($V_{\text{IN}} - \text{INTV}_{\text{CC}}$)	INTV _{CC} = -10mA, Below V_{IN} Turn-Off Voltage		750	1150	mV
Current Limit	Below Undervoltage Threshold	15	25		mA
Current Limit	Above Undervoltage Threshold	80	120		mA

Change to 12

Gate Driver

t_r GATE Driver Output Rise Time	$C_L = 3300\text{pF}$, 10% to 90%		20		ns
t_f GATE Driver Output Fall Time	$C_L = 3300\text{pF}$, 90% to 10%		20		ns
GATE Output Low (V_{OL})				0.05	V
GATE Output High (V_{OH})		INTV _{CC} - 0.05			V

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 LT3799-1E is guaranteed to meet performance specifications from 0°C to 125°C junction temperature. Specifications over the -40°C

to 125°C operating junction temperature range are assured by design, characterization and correlation with statistical process controls. The LT3799-1I is guaranteed to meet performance specifications from -40°C to 125°C operating junction temperature.

Note 3: Current flows out of the FB pin.