ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at T_A = 25°C (Note 2). V_{IN} = 12V, $V_{EN/UVLO}$ = 1.5V unless otherwise noted.

PARAMETER	CONDITIONS		MIN	TYP	MAX	UNITS
Control Inputs/Outputs						
EN/UVLO Shutdown Threshold		●	0.3	0.6	1.0	V
EN/UVLO Enable Threshold	Falling	●	1.196	1.220	1.244	V
EN/UVLO Enable Hysteresis				13		mV
EN/UVLO Hysteresis Current	$V_{EN/UVLO}$ = 0.3V $V_{EN/UVLO}$ = 1.1V $V_{EN/UVLO}$ = 1.3V		–0.1 2.2 –0.1	0 2.5 0	0.1 ~~2.8~~ 2.9 0.1	µA µA µA
CTRL Input Bias Current	V_{CTRL} = 0.75V, Current Out of Pin		0	20	50	nA
CTRL Latch-Off Threshold	Falling	●	285	300	315	mV
CTRL Latch-Off Hysteresis				25		mV
Load Switch Driver						
LOADEN Threshold	Rising	●	1.3	1.4	1.5	V
LOADEN Hysteresis				220		mV
Minimum V_{OUT} for LOADTG to be On	V_{LOADEN} = 5V			2.4	3	V
LOADTG On Voltage $V_{(VOUT-LOADTG)}$	V_{OUT} = 12V		4.6	5	~~5.4~~ 5.6	V
LOADTG Off Voltage $V_{(VOUT-LOADTG)}$	V_{OUT} = 12V		–0.1	0	0.1	V
LOADEN to LOADTG Turn On Propagation Delay LOADEN to LOADTG Turn Off Propagation Delay	C_{LOADTG} = 3.3nF to V_{OUT}, 50% to 50% C_{LOADTG} = 3.3nF to V_{OUT}, 50% to 50%			90 40		ns ns
LOADTG Turn On Fall Time LOADTG Turn Off Rise Time	C_{LOADTG} = 3.3nF to V_{OUT}, 10% to 90% C_{LOADTG} = 3.3nF to V_{OUT}, 90% to 10%			300 10		ns ns
Error Amplifier						
Full Scale Current Regulation $V_{(ISP-ISN)}$	V_{CTRL} = 2V, V_{ISP} = 12V V_{CTRL} = 2V, V_{ISP} = 0V	● ●	97 97	100 100	103 103	mV mV
1/10th Current Regulation $V_{(ISP-ISN)}$	V_{CTRL} = 0.35V, V_{ISP} = 12V V_{CTRL} = 0.35V, V_{ISP} = 0V	● ●	8 8	10 10	12 12	mV mV
ISMON Monitor Output V_{ISMON}	$V_{(ISP-ISN)}$ = 100mV, V_{ISP} = 12V/0V $V_{(ISP-ISN)}$ = 10mV, V_{ISP} = 12V/0V $V_{(ISP-ISN)}$ = 0mV, V_{ISP} = 12V/0V	● ● ●	1.20 0.30 0.20	1.25 0.35 0.25	1.30 0.40 0.30	V V V
ISP/ISN Input Common Mode Range		●	0		60	V
ISP/ISN Low Side to High Side Switchover Voltage	V_{ISP} = V_{ISN}			1.8		V
ISP/ISN High Side to Low Side Switchover Voltage	V_{ISP} = V_{ISN}			1.7		V
ISP Input Bias Current	V_{LOADEN} = 5V, V_{ISP} = V_{ISN} = 12V V_{LOADEN} = 5V, V_{ISP} = V_{ISN} = 0V $V_{EN/UVLO}$ = 0V, V_{ISP} = V_{ISN} = 12V or 0V			23 –10 0		µA µA µA
ISN Input Bias Current	V_{LOADEN} = 5V, V_{ISP} = V_{ISN} = 12V V_{LOADEN} = 5V, V_{ISP} = V_{ISN} = 0V $V_{EN/UVLO}$ = 0V, V_{ISP} = V_{ISN} = 12V or 0V			23 –10 0		µA µA µA
ISP/ISN Current Regulation Amplifier g_m				2000		µs
FB Regulation Voltage	V_C = 1.2V	●	0.985	1.00	1.015	V
FB Line Regulation	V_{IN} = 4V to 60V			0.2	0.5	%
FB Load Regulation				0.2	0.8	%
FB Voltage Regulation Amplifier g_m				660		µS
FB Input Bias Current	FB in Regulation, Current Out of Pin			10	40	nA
V_C Output Impedance				10		MΩ
V_C Standby Leakage Current	V_C = 1.2V, V_{LOADEN} = 0V		–10	0	10	nA