ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at T_A = 25°C.

PARAMETER	CONDITIONS		MIN	TYP	MAX	UNITS
Reference Current RMS Output Noise (Notes 9, 12)	BW = 10Hz to 100kHz			8		nA_{RMS}
Ripple Rejection $-18V \le V_{OUT} \le -1.5V$ $V_{IN} - V_{OUT}$ = 2V (Avg) (Notes 9, 12)	V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 120Hz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 4.7µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 10kHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 100kHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 1MHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 10MHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF			108 94 75 74 28		dB dB dB dB dB
Ripple Rejection $-1.5V \le V_{OUT} \le 0V$ $V_{IN} - V_{OUT}$ = 2V (Avg) (Notes 9, 12)	V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 120Hz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 4.7µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 10kHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 100kHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 1MHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF V_{RIPPLE} = 500mV_{P-P}, f_{RIPPLE} = 10MHz, I_{LOAD} = 500mA, C_{OUT} = 10µF, C_{SET} = 0.47µF			108 90 72 78 30		dB dB dB dB dB
EN/UV Pin Threshold	Positive EN/UV Trip Point Rising (Turn-On), V_{IN} = –2.3V Negative EN/UV Trip Point Rising (Turn-On), V_{IN} = –2.3V	● ●	1.20 –1.33	1.26 –1.26	1.33 –1.20	V V
EN/UV Pin Hysteresis	Positive EN/UV Trip Point Hysteresis, V_{IN} = –2.3V Negative EN/UV Trip Point Hysteresis, V_{IN} = –2.3V			200 215		mV mV
EN/UV Pin Current	$V_{EN/UV}$ = 0V, V_{IN} = –20V $V_{EN/UV}$ = –1.5V, V_{IN} = –20V $V_{EN/UV}$ = –20V, V_{IN} = –20V $V_{EN/UV}$ = 1.5V, V_{IN} = –20V $V_{EN/UV}$ = 20V, V_{IN} = 0V	● ● ●	–1 –35 	 –0.5 –18.5 8 25	1 45	µA µA µA µA µA
Quiescent Current in Shutdown ($V_{EN/UV}$ = 0V)	V_{IN} = –6V, V_{PG} = Open	 ●		3	8 10	µA µA
Internal Current Limit (Note 14)	V_{IN} = –2.3V, V_{OUT} = 0V V_{IN} = –12V, V_{OUT} = 0V V_{IN} = –20V, V_{OUT} = 0V	● ●	550 40	750 425 85	 160	mA mA mA
Programmable Current Limit	Programming Scale Factor: –20V < V_{IN} < –2.3V (Note 13) V_{IN} = –2.3V, V_{OUT} = 0V, R_{ILIM} = 7.5kΩ V_{IN} = –2.3V, V_{OUT} = 0V, R_{ILIM} = 37.5kΩ	 ● ●	 450 90	3.75 500 105	 560 120	A • kΩ mA mA
PGFB Trip Point	PGFB Trip Point Rising	●	288	300	312	mV
PGFB Hysteresis	PGFB Trip Point Hysteresis			7		mV
PGFB Pin Current	V_{IN} = –2.3V, V_{PGFB} = –300mV			30	100	nA
PG Output Low Voltage	I_{PG} = 100µA	●		17	50	mV
PG Leakage Current	V_{PG} = 20V	●			1	µA
VIOC Amplifier Gain	–20V ≤ V_{IN} ≤ –2.3V, V_{OUT} ≤ –1.5V			1		V/V
VIOC Maximum Output Voltage Swing	$V_{IN} - V_{OUT}$ = –2V, V_{OUT} ≤ –1.5V	●		–1.35	–1.2	V
VIOC Sink Current	$V_{IN} - V_{OUT}$ = –2V, V_{VIOC} = –1V	●	100			µA
VIOC Voltage for Low Output Voltages (Note 15)	V_{IN} = –2.3V, V_{OUT} > –1.5V			–0.8		V
Minimum Load Current (Note 16)	V_{OUT} > –1.5V	●			10	µA
Thermal Shutdown	T_J Rising Hysteresis			167 8		°C °C
Start-Up Time	R_{SET} = 49.9k, $V_{OUT(NOM)}$ = –5V, I_{LOAD} = 500mA, C_{SET} = 0.47µF, V_{IN} = –6V, V_{PGFB} = –6V R_{SET} = 49.9k, $V_{OUT(NOM)}$ = –5V, I_{LOAD} = 500mA, C_{SET} = 4.7µF, V_{IN} = –6V, V_{PGFB} = –6V R_{SET} = 49.9k, $V_{OUT(NOM)}$ = –5V, I_{LOAD} = 500mA, C_{SET} = 4.7µF, V_{IN} = –6V, R_{PG1} = 50kΩ, R_{PG2} = 700kΩ (with Fast Start-Up to 90% of V_{OUT})			55 550 10		ms ms ms
Thermal Regulation	10ms Pulse			–0.01		%/W

1.35