ELECTRICAL CHARACTERISTICS

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

PARAMETER	CONDITIONS		MIN	TYP	MAX	UNITS
V_{IN} Operating Voltage Range		●	2.8		60	V
V_{IN} Quiescent Current at Shutdown	$V_{EN/UVLO}$ = 0.2V	 ●		1 1	2 15	µA µA
	$V_{EN/UVLO}$ = 1.5V	 ●		2 2	5 25	µA µA
V_{IN} Quiescent Current						
Sleep Mode (Not Switching)	SYNC = 0V	 ●		9 9	15 30	µA µA
Active Mode (Not Switching)	SYNC = 0V or $INTV_{CC}$, BIAS = 0V	 ●		1200 1200	1600 1850	µA µA
	SYNC = 0V or $INTV_{CC}$, BIAS = 5V	 ●		22 22	40 65	µA µA
BIAS Threshold	Rising, BIAS Can Supply $INTV_{CC}$ Falling, BIAS Cannot Supply $INTV_{CC}$			4.4 4	4.65 4.25	V V
V_{IN} Falling Threshold to Supply $INTV_{CC}$	BIAS = 12V			BIAS – 2V		V
BIAS Falling Threshold to Supply $INTV_{CC}$	V_{IN} = 12V			V_{IN}		V
FBX Regulation						
FBX Regulation Voltage	FBX > 0V FBX < 0V	● ●	1.568 ~~–0.820~~ -0.822	1.6 –0.80	~~1.632~~ 1.636 –0.780	V V
FBX Line Regulation	FBX > 0V, 2.8V < V_{IN} < 60V FBX < 0V, 2.8V < V_{IN} < 60V			0.005 0.005	0.015 0.015	%/V %/V
FBX Pin Current	FBX = 1.6V, –0.8V	●	–10		10	nA
Oscillator						
Switching Frequency (f_{OSC})	R_T = 165k R_T = 45.3k R_T = 20k	● ● ●	~~273~~ 265 ~~0.92~~ 0.90 1.85	300 1 2	327 1.08 2.15	kHz MHz MHz
SSFM Maximum Frequency Deviation	$(\Delta f/f_{OSC}) \cdot 100$, R_T = 20k		14	20	~~25~~ 28	%
Minimum On-Time	Burst Mode, V_{IN} = 24V (Note 6) Pulse-Skip Mode, V_{IN} = 24V (Note 6)			70 70	95 90	ns ns
Minimum Off-Time		●		55	75	ns
SYNC/Mode, Mode Thresholds (Note 5)	High (Rising), V_{IN} = 24V Low (Falling), V_{IN} = 24V	● ●	 0.14	1.3 0.2	1.7	V V
SYNC/Mode, Clock Thresholds (Note 5)	Rising, V_{IN} = 24V Falling, V_{IN} = 24V	● ●	 0.4	1.3 0.8	1.7	V V
f_{SYNC}/f_{OSC} Allowed Ratio	R_T = 20k		0.95	1	1.25	kHz/kHz
SYNC Pin Current	SYNC = 2V SYNC = 0V, Current Out of Pin			10 10	25 25	µA µA
Switch						
Maximum Switch Current Limit Threshold		●	2	2.5	3.4	A
Switch Overcurrent Threshold	Discharges SS Pin			3.75		A
Switch $R_{DS(ON)}$	I_{SW} = 0.5A			375		mΩ
Switch Leakage Current	V_{SW} = 100V			0.1	1	µA