

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	2	μA
		●		1	15	μA
V _{IN} Quiescent Current	V _{EN/UVLO} = 1.5V	●		2	5	μA
		●		2	25	μA
Sleep Mode (Not Switching)						
Sleep Mode (Not Switching)	SYNC = 0V	●		9	15	μA
		●		9	30	μA
Active Mode (Not Switching)						
Active Mode (Not Switching)	SYNC = 0V or INTV _{CC} , BIAS = 0V	●		1200	1600	μA
		●		1200	1850	μA
Active Mode (Not Switching)	SYNC = 0V or INTV _{CC} , BIAS = 5V	●		22	40	μA
		●		22	65	μA
BIAS Threshold	Rising, BIAS Can Supply INTV _{CC}			4.4	4.65	V
	Falling, BIAS Cannot Supply INTV _{CC}			4	4.25	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	●	1.568	1.6	1.632 1.636	V
	FBX < 0V	●	-0.820	-0.80	-0.780	V
FBX Line Regulation	FBX > 0V, 2.8V < V _{IN} < 60V		-0.822	0.005	0.015	%/V
	FBX < 0V, 2.8V < V _{IN} < 60V			0.005	0.015	%/V
FBX Pin Current	FBX = 1.6V, -0.8V	●	-10		10	nA
Oscillator						
Switching Frequency (f _{osc})	R _T = 165k	●	273	300	327	kHz
	R _T = 45.3k	●	0.92 0.90	1	1.08	MHz
	R _T = 20k	●	1.85	2	2.15	MHz
SSFM Maximum Frequency Deviation	Δf/f _{osc} * 100, R _T = 20k		14	20	25 28	%
Minimum On-Time	Burst Mode, V _{IN} = 24V (Note 6)			85	110	ns
	Pulse-Skip Mode, V _{IN} = 24V (Note 6)			60	85	ns
Minimum Off-Time		●		50	75	ns
SYNC/Mode, Mode Thresholds (Note 5)	High (Rising)	●		1.3	1.7	V
	Low (Falling)	●	0.14	0.2		V
SYNC/Mode, Clock Thresholds (Note 5)	Rising	●		1.3	1.7	V
	Falling	●	0.4	0.8		V
f _{SYNC} /f _{osc} Allowed Ratio	R _T = 20k		0.95	1	1.25	kHz/kHz
SYNC Pin Current	SYNC = 2V			10	25	μA
	SYNC = 0V, Current Out of Pin			10	25	μA
Switch						
Maximum Switch Current Limit Threshold		●	4	5	6.4	A
Switch Overcurrent Threshold	Discharges SS Pin			7.5		A
Switch R _{DS(ON)}	I _{SW} = 0.5A			100		mΩ
Switch Leakage Current	V _{SW} = 60V			0.1	1	μA