

ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full internal operating temperature range (Note 2). Specified as each individual output channel. $T_A = 25^\circ\text{C}$, $V_{IN} = 12\text{V}$ and V_{RUN1} , V_{RUN2} at 5V unless otherwise noted, per the typical application in Figure 28.

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
V_{IN}	Input DC Voltage		●	4.5	26.5	V	
V_{OUT}	Output Voltage		●	0.6	5.5	V	
$V_{OUT1(DC)}$, $V_{OUT2(DC)}$	Output Voltage, Total Variation with Line and Load	$C_{IN} = 22\mu\text{F} \times 3$, $C_{OUT} = 100\mu\text{F} \times 1$ Ceramic, 470 μF POSCAP, MODE_PLLIN = GND, RFB1, RFB2 = 40.2k, $V_{IN} = 4.5\text{V}$ to 26.5V, $I_{OUT} = 0\text{A}$ to 8A	●	1.477	1.5	1.523	V

Input Specifications

V_{RUN1} , V_{RUN2}	RUN Pin On/Off Threshold	RUN Rising		1.1	1.25	1.40	V
$V_{RUN1HYS}$, $V_{RUN2HYS}$	RUN Pin On Hysteresis			150			mV
$I_{INRUSH(VIN)}$	Input Inrush Current at Start-Up	$I_{OUT} = 0\text{A}$, $C_{IN} = 22\mu\text{F} \times 3$, $C_{OUT} = 100\mu\text{F}$, 470 μF POSCAP $V_{OUT1} = 1.5\text{V}$, $V_{OUT2} = 1.5\text{V}$, $V_{IN} = 12\text{V}$, TRACK = 0.01 μF		1			A
$I_{Q(VIN)}$	Input Supply Bias Current	$V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$, Burst Mode Operation $V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$, Pulse-Skipping Mode $V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$, Switching Continuous Shutdown, RUN = 0, $V_{IN} = 12\text{V}$		5			mA
				15			mA
				65			mA
				60			μA
$I_{S(VIN)}$	Input Supply Current	$V_{IN} = 4.75\text{V}$, $V_{OUT} = 1.5\text{V}$, $I_{OUT} = 8\text{A}$ $V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$, $I_{OUT} = 8\text{A}$ $V_{IN} = 26.5\text{V}$, $V_{OUT} = 1.5\text{V}$, $I_{OUT} = 8\text{A}$		2.9			A
				1.18			A
				0.575			A

Output Specifications

$I_{OUT1(DC)}$, $I_{OUT2(DC)}$	Output Continuous Current Range	$V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$ (Note 7)		0		8	A
$\Delta V_{OUT1(LINE)}/V_{OUT1}$ $\Delta V_{OUT2(LINE)}/V_{OUT2}$	Line Regulation Accuracy	$V_{OUT} = 1.5\text{V}$, V_{IN} from 4.5V to 26.5V $I_{OUT} = 0\text{A}$ for Each Output,	●		0.010	0.04	%/V
$\Delta V_{OUT1(LOAD)}/V_{OUT1}$ $\Delta V_{OUT2(LOAD)}/V_{OUT2}$	Load Regulation Accuracy	For Each Output, $V_{OUT} = 1.5\text{V}$, 0A to 8A $V_{IN} = 12\text{V}$ (Note 7)	●		0.15	0.3	%
$V_{OUT1(AC)}$, $V_{OUT2(AC)}$	Output Ripple Voltage	$I_{OUT} = 0\text{A}$, $C_{OUT} = 100\mu\text{F}$ X5R Ceramic, 470 μF POSCAP $V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$			15		mV _{p-p}
f_S (Each Channel)	Output Ripple Voltage Frequency	$V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$, $f_{SET} = 2.5\text{V}$ (Note 4)			780		kHz
f_{SYNC} (Each Channel)	SYNC Capture Range			400		750	kHz
$\Delta V_{OUTSTART}$ (Each Channel)	Turn-On Overshoot	$C_{OUT} = 100\mu\text{F}$ X5R Ceramic, 470 μF POSCAP, $V_{OUT} = 1.5\text{V}$, $I_{OUT} = 0\text{A}$ $V_{IN} = 12\text{V}$			10		mV
t_{START} (Each Channel)	Turn-On Time	$C_{OUT} = 100\mu\text{F}$ X5R Ceramic, 470 μF POSCAP, No Load, TRACK/SS with 0.01 μF to GND, $V_{IN} = 12\text{V}$			5		ms
$\Delta V_{OUT(LS)}$ (Each Channel)	Peak Deviation for Dynamic Load	Load: 0% to 50% to 0% of Full Load $C_{OUT} = 22\mu\text{F} \times 3$ X5R Ceramic, 470 μF POSCAP $V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$			30		mV
t_{SETTLE} (Each Channel)	Settling Time for Dynamic Load Step	Load: 0% to 50% to 0% of Full Load, $V_{IN} = 12\text{V}$, $C_{OUT} = 100\mu\text{F}$, $C_{OUT} = 470\mu\text{F}$			20		μs
$I_{OUT(PK)}$ (Each Channel)	Output Current Limit	$V_{IN} = 12\text{V}$, $V_{OUT} = 1.5\text{V}$			15		A

Control Section

V_{FB1} , V_{FB2}	Voltage at V_{FB} Pins	$I_{OUT} = 0\text{A}$, $V_{OUT} = 1.5\text{V}$	●	0.592	0.600	0.606	V
I_{FB1} , I_{FB2}	Leakage Current of V_{FB1} , V_{FB2}	(Note 6)			-5	-20	nA
V_{OVL}	Feedback Overvoltage Lockout		●	0.64	0.66	0.68	V

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