

Electrical Specifications (continued)

Parameter	Device	Symbol	Min	Typ	Max	Unit
Output Voltage Set-point ($V_{IN}=V_{IN,nom}$, $I_O=I_{O,nom}$, $T_{ref}=25^{\circ}C$)	All	$V_{O,set}$	-1.0	—	+1.0	% $V_{O,set}$
Output Voltage (Over all operating input voltage, resistive load, and temperature conditions until end of life)	All	$V_{O,set}$	-2.0	—	+2.0	% $V_{O,set}$
Adjustment Range Selected by an external resistor	All	V_O	0.7		2.0	Vdc
Output Regulation						
Line ($V_{IN}=V_{IN,min}$ to $V_{IN,max}$)	All		—		5	mV
Load ($I_O=I_{O,min}$ to $I_{O,max}$)	All		—		8	mV
Temperature ($T_{ref}=T_{A,min}$ to $T_{A,max}$)	All		—		8	mV
Remote Sense Range	All				0.5	Vdc
Output Ripple and Noise on nominal output ($V_{IN}=V_{IN,nom}$ and $I_O=I_{O,min}$ to $I_{O,max}$ Cout = 1 μ F ceramic//2x10 μ F ceramic capacitors) Peak-to-Peak (5Hz to 20MHz bandwidth)	All		—		50	mV _{pk-pk}
External Capacitance ¹ Without the Tunable Loop™						
ESR \geq 1 m Ω	All	$C_{O,max}$	—	—	1200	μ F
ESR \geq 10 m Ω	All	$C_{O,max}$	—	—	10000	μ F
With the Tunable Loop						
ESR \geq 1 m Ω	All	$C_{O,max}$	—	—	20000	μ F
ESR \geq 10 m Ω	All	$C_{O,max}$	—	—	20000	μ F
Output Current	All	I_O	0		50A	Adc
Output Current Limit Inception (Hiccup Mode)	All	$I_{O,lim}$	—	180	—	% I_O
Output Short-Circuit Current ($V_O \leq 250mV$) (Hiccup Mode)	All	$I_{O,s/c}$	—	5.5	—	Adc
Efficiency	$V_{O,set} = 0.7Vdc$	η		81.1		%
$V_{IN} = 12V$, $T_A = 25^{\circ}C$	$V_{O,set} = 1.2Vdc$	η		87.0		%
$I_O = I_{O,max}$, $V_O = V_{O,set}$	$V_{O,set} = 1.8Vdc$	η		90.1		%
Switching Frequency	All	f_{sw}	—	260	—	kHz

General Specifications

Parameter	Min	Typ	Max	Unit
Telcordia Issue 2, Method I, Case 3, Calculated MTBF ($I_O=I_{O,max}$, $T_A=40^{\circ}C$)		4,755,661		Hours
Weight	—	14.22 (0.5)		g (oz.)

External capacitors may require using the new Tunable Loop™ feature to ensure that the module is stable as well as getting the best transient response. See the Tunable Loop™ section for details.

Feature Specifications

Unless otherwise indicated, specifications apply over all operating input voltage, resistive load, and temperature conditions. See Feature Descriptions for additional information.

Parameter	Device	Symbol	Min	Typ	Max	Unit
On/Off Signal Interface ($V_{IN}=V_{IN, min}$ to $V_{IN, max}$; open collector or equivalent, Signal referenced to GND) Logic High (On/Off pin open – Module OFF) Input High Current Input High Voltage Logic Low (Module ON) Input Low Current Input Low Voltage	All All All All	I _{IH} V _{IH} I _{IL} V _{IL}	0.5 3.0 — -0.3	— — — —	3.3 V _{IN, max} 200 0.6	mA V μA V
Turn-On Delay and Rise Times ($I_O=I_{O, max}$, $V_{IN} = V_{IN, nom}$, $T_A = 25^\circ\text{C}$,) Case 1: On/Off input is set to Logic Low (Module ON) and then input power is applied (delay from instant at which $V_{IN} = V_{IN, min}$ until $V_O=10\%$ of $V_{O, set}$) Case 2: Input power is applied for at least one second and then the On/Off input is set to logic Low (delay from instant at which $V_{on/off}=0.3\text{V}$ until $V_O=10\%$ of $V_{O, set}$) Output voltage Rise time (time for V_O to rise from 10% of $V_{O, set}$ to 90% of $V_{O, set}$)	All All All	T _{delay} T _{delay} Trise	— — —	4.8 4.8 3.6	— — —	msec msec msec
Output voltage overshoot – Startup $I_O= I_{O, max}$; $V_{IN} = 4.5$ to 14Vdc, $T_A = 25^\circ\text{C}$				—	3.0	% $V_{O, set}$
Over Temperature Protection (See Thermal Consideration section)	All	T _{ref}	—	125	—	°C
Sequencing Slew rate capability ($V_{IN, min}$ to $V_{IN, max}$; $I_{O, min}$ to $I_{O, max}$ $V_{SEQ} < V_O$)	All	dV _{SEQ} /dt		—	2	V/msec
Sequencing Delay time (Delay from $V_{IN, min}$ to application of voltage on SEQ pin)	All	T _{SEQ-delay}	10			msec
Tracking Accuracy Power-up (2V/ms) Power-down (1V/ms) ($V_{IN, min}$ to $V_{IN, max}$; $I_{O, min}$ - $I_{O, max}$ $V_{SEQ} < V_O$)	All	V _{SEQ} - V_O V _{SEQ} - V_O		100 200	200 400	mV mV
Input Undervoltage Lockout Turn-on Threshold Turn-off Threshold Hysteresis	All All All			4.26 4.04 0.22		V V Vdc
Forced Load Share Accuracy	All		—	10		% I_O
Number of units in Parallel	All				5	
PGOOD (Power Good) Internal pull-up, V _{PGOOD} Overvoltage threshold for PGOOD Undervoltage threshold for PGOOD	All All All			5 112.5 87.5		V % $V_{O, set}$ % $V_{O, set}$