

Electrical Specifications (continued)

Parameter	Device	Symbol	Min	Typ	Max	Unit
Output Voltage Set-point ($V_{IN}=V_{IN, min}$, $I_O=I_{O, max}$, $T_A=25^\circ\text{C}$)	All	$V_{O, set}$	-2.0	$V_{O, set}$	+2.0	% $V_{O, set}$
Output Voltage (Over all operating input voltage, resistive load, and temperature conditions until end of life)	All	$V_{O, set}$	-2.5%	—	+3.5%	% $V_{O, set}$
Adjustment Range Selected by an external resistor	All	V_O	0.7525		5.5	Vdc
Output Regulation Line ($V_{IN}=V_{IN, min}$ to $V_{IN, max}$) Load ($I_O=I_{O, min}$ to $I_{O, max}$) Temperature ($T_{ref}=T_{A, min}$ to $T_{A, max}$)	All All All		— — —	0.3 0.4 0.4	— — —	% $V_{O, set}$ % $V_{O, set}$ % $V_{O, set}$
Output Ripple and Noise on nominal output ($V_{IN}=V_{IN, nom}$ and $I_O=I_{O, min}$ to $I_{O, max}$ $C_{out} = 1\mu\text{F}$ ceramic//10 μF tantalum capacitors)						
RMS (5Hz to 20MHz bandwidth)	All		—	12	30	mV _{rms}
Peak-to-Peak (5Hz to 20MHz bandwidth)	All		—	30	75	mV _{pk-pk}
External Capacitance ESR ≥ 1 m Ω ESR ≥ 10 m Ω	All All	$C_{O, max}$ $C_{O, max}$	— —	— —	1000 5000	μF μF
Output Current	All	I_O	0		16	Adc
Output Current Limit Inception (Hiccup Mode) ($V_O=90\%$ of $V_{O, set}$)	All	$I_{O, lim}$	—	180	—	% I_O
Output Short-Circuit Current ($V_O \leq 250\text{mV}$) (Hiccup Mode)	All	$I_{O, s/c}$	—	3	—	Adc
Efficiency $V_{IN}=V_{IN, nom}$, $T_A=25^\circ\text{C}$ $I_O=I_{O, max}$, $V_O=V_{O, set}$		η				%
	$V_{O, set} = 0.75\text{Vdc}$	η		79.0		%
	$V_{O, set} = 1.2\text{Vdc}$	η		85.0		%
	$V_{O, set} = 1.5\text{Vdc}$	η		87.0		%
	$V_{O, set} = 1.8\text{Vdc}$	η		88.0		%
	$V_{O, set} = 2.5\text{Vdc}$	η		90.5		%
	$V_{O, set} = 3.3\text{Vdc}$	η		92.0		%
	$V_{O, set} = 5.0\text{Vdc}$	η		94.0		%
Switching Frequency	All	f_{sw}	—	300	—	kHz
Dynamic Load Response ($dI_O/dt=2.5\text{A}/\mu\text{s}$; $V_{IN} = V_{IN, nom}$; $T_A=25^\circ\text{C}$) Load Change from $I_O=50\%$ to 100% of $I_{O, max}$; $1\mu\text{F}$ ceramic// $10\mu\text{F}$ tantalum Peak Deviation Settling Time ($V_O < 10\%$ peak deviation)	All	V_{pk}	—	200	—	mV
	All	t_s	—	25	—	μs
($dI_O/dt=2.5\text{A}/\mu\text{s}$; $V_{IN} = V_{IN, nom}$; $T_A=25^\circ\text{C}$) Load Change from $I_O=100\%$ to 50% of $I_{O, max}$: $1\mu\text{F}$ ceramic// $10\mu\text{F}$ tantalum Peak Deviation Settling Time ($V_O < 10\%$ peak deviation)	All	V_{pk}	—	200	—	mV
	All	t_s	—	25	—	μs

Electrical Specifications (continued)

Parameter	Device	Symbol	Min	Typ	Max	Unit
Dynamic Load Response ($di/dt=2.5A/\mu s$; $V_{IN} = V_{IN, nom}$; $T_A=25^\circ C$) Load Change from $I_o = 50\%$ to 100% of $I_{o,max}$; $C_o = 2 \times 150 \mu F$ polymer capacitors Peak Deviation	All	V_{pk}	—	100	—	mV
Settling Time ($V_o < 10\%$ peak deviation)	All	t_s	—	50	—	μs
($di/dt=2.5A/\mu s$; $V_{IN} = V_{IN, nom}$; $T_A=25^\circ C$) Load Change from $I_o = 100\%$ to 50% of $I_{o,max}$; $C_o = 2 \times 150 \mu F$ polymer capacitors Peak Deviation	All	V_{pk}	—	100	—	mV
Settling Time ($V_o < 10\%$ peak deviation)	All	t_s	—	50	—	μs

General Specifications

Parameter	Min	Typ	Max	Unit
Calculated MTBF ($I_o = I_{o, max}$, $T_A = 25^\circ C$)		4,444,000		Hours
Weight	—	5.6 (0.2)	—	g (oz.)