

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 $I_{O, max}$ Cout = 1 $\mu\text{F}$ ceramic//10 $\mu\text{F}$ tantalum capacitors)						
RMS (5Hz to 20MHz bandwidth)	All		—	15	30	mV <sub>rms</sub>
Peak-to-Peak (5Hz to 20MHz bandwidth)	All		—	30	75	mV <sub>pk-pk</sub>
External Capacitance ESR $\geq$ 1 m $\Omega$ ESR $\geq$ 10 m $\Omega$	All All	$C_{O, max}$ $C_{O, max}$	— —	— —	1000 3000	$\mu\text{F}$ $\mu\text{F}$
Output Current	All	$I_o$	0		5	Adc
Output Current Limit Inception (Hiccup Mode ) ( $V_O=90\%$ of $V_{O, set}$ )	All	$I_{o, lim}$	—	200	—	% $I_o$
Output Short-Circuit Current ( $V_O \leq 250\text{mV}$ ) ( Hiccup Mode )	All	$I_{o, s/c}$	—	2	—	Adc
Efficiency $V_{IN}=V_{IN, nom}$ , $T_A=25^\circ\text{C}$ $I_O=I_{O, max}$ , $V_O=V_{O, set}$	$V_{O, set} = 1.2\text{Vdc}$ $V_{O, set} = 1.5\text{Vdc}$ $V_{O, set} = 1.8\text{Vdc}$ $V_{O, set} = 2.5\text{Vdc}$ $V_{O, set} = 3.3\text{Vdc}$ $V_{O, set} = 5.0\text{Vdc}$	$\eta$ $\eta$ $\eta$ $\eta$ $\eta$ $\eta$		81.5 84.0 85.0 87.0 89.0 92.0		% % % % % %
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 All	$V_{pk}$ $t_s$	— —	200 25	— —	mV $\mu\text{s}$
( $dI_O/dt=2.5\text{A}/\mu\text{s}$ ; $V_{IN} = V_{IN, nom}$ ; $T_A=25^\circ\text{C}$ ) 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 All	$V_{pk}$ $t_s$	— —	200 25	— —	mV $\mu\text{s}$

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

### General Specifications

Parameter	Min	Typ	Max	Unit
Calculated MTBF ( $I_o=I_{o, max}$ , $T_A=25^\circ C$ )		5,677,000		Hours
Weight	—	2.8 (0.1)	—	g (oz.)