

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 ($V_{IN}=V_{IN, min}$ to $V_{IN, max}$ and $I_O=I_{O, min}$ to $I_{O, max}$ Cout = 1 μF ceramic//10 μF tantalum capacitors)						
RMS (5Hz to 20MHz bandwidth)	$V_O \leq 3.63\text{Vdc}$	—	12	30	mV _{rms}	
Peak-to-Peak (5Hz to 20MHz bandwidth)	$V_O \leq 3.63\text{Vdc}$	—	30	75	mV _{pk-pk}	
RMS (5Hz to 20MHz bandwidth)	$V_O = 5.0\text{Vdc}$	—	25	40	mV _{rms}	
Peak-to-Peak (5Hz to 20MHz bandwidth)	$V_O = 5.0\text{Vdc}$	—	70	100	mV _{pk-pk}	
External Capacitance ESR $\geq 1\text{ m}\Omega$ ESR $\geq 10\text{ m}\Omega$	All All	$C_{O, max}$ $C_{O, max}$	— —	— —	1000 5000	μF μF
Output Current	All	I_O	0		10	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	$I_{O, s/c}$	—	3.0	—	Adc
Efficiency $V_{IN} = V_{IN, nom}$, $T_A = 25^\circ\text{C}$ $I_O = I_{O, max}$, $V_O = V_{O, set}$	$V_{O, set} = 0.75\text{Vdc}$ $V_{O, set} = 1.2\text{Vdc}$ $V_{O, set} = 1.5\text{Vdc}$ $V_{O, set} = 1.8\text{Vdc}$ $V_{O, set} = 2.5\text{Vdc}$ $V_{O, set} = 3.3\text{Vdc}$ $V_{O, set} = 5.0\text{Vdc}$	η η η η η η η		81.0 87.5 89.0 90.0 92.0 93.0 95.0		% % % % % % %
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 μF ceramic// 10 μF tantalum Peak Deviation Settling Time ($V_O < 10\%$ peak deviation)	All All	V_{pk} t_s	— —	250 50	— —	mV 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 μF ceramic// 10 μF tantalum Peak Deviation Settling Time ($V_O < 10\%$ peak deviation)	All All	V_{pk} t_s	— —	250 50	— —	mV μs

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Parameter	Device	Symbol	Min	Typ	Max	Unit
Dynamic Load Response ($dI_o/dt=2.5A/\mu s$; $V_{IN} = V_{IN, nom}$; $T_A=25^\circ C$) 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	—	25	—	μs
($dI_o/dt=2.5A/\mu s$; $V_{IN} = V_{IN, nom}$; $T_A=25^\circ C$) 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	—	25	—	μs

General Specifications

Parameter	Min	Typ	Max	Unit
Calculated MTBF ($I_o = I_{o, max}$, $T_A=25^\circ C$) Telecordia SR-332 Issue 1: Method 1 Case 3		15,618,000		Hours
Weight	—	5.6 (0.2)	—	g (oz.)