Electrical Characteristics (LM7810)

Refer to the test circuit, -40°C < T_J < 125°C, I_O = 500 mA, V_I = 16 V, C_I = 0.33 µF, C_O = 0.1 µF, unless otherwise specified.

Symbol	Parameter	Conditions		Min.	Typ.	Max.	Unit
V_O	Output Voltage	T_J = +25°C		9.6	10.0	10.4	V
		I_O = 5 mA to 1 A, $P_O \leq$ 15 W, V_I = 12.5 V to 25 V		9.5	10.0	10.5	
Regline	Line Regulation(10)	T_J = +25°C	V_I = 12.5 V to 25 V		10	200	mV
			V_I = 13 V to 25 V		3	100	
Regload	Load Regulation(10)	T_J = +25°C	I_O = 5 mA to 1.5 A		12	200	mV
			I_O = 250 mA to 750 mA		4	400	
I_Q	Quiescent Current	T_J = +25°C			5.1	8.0	mA
ΔI_Q	Quiescent Current Change	I_O = 5 mA to 1 A				0.5	mA
		V_I = 12.5 V to 29 V				1.0	
$\Delta V_O/\Delta T$	Output Voltage Drift(11)	I_O = 5 mA			-1		mV/°C
V_N	Output Noise Voltage	f = 10 Hz to 100 kHz, T_A = +25°C			58		µV
RR	Ripple Rejection(11)	f = 120 Hz, V_I = 13 V to 23 V		56	71		dB
V_{DROP}	Dropout Voltage	I_O = 1 A, T_J = +25°C			2		V
R_O	Output Resistance(11)	f = 1 kHz			17		mΩ
I_{SC}	Short-Circuit Current	V_I = 35 V, T_J = +25°C			250		mA
I_{PK}	Peak Current(11)	T_J = +25°C			2.2		A

Notes:

10. Load and line regulation are specified at constant junction temperature. Changes in V_O due to heating effects must be taken into account separately. Pulse testing with low duty is used.
11. These parameters, although guaranteed, are not 100% tested in production.