

ELECTRICAL CHARACTERISTICS OF L7812 (refer to the test circuits, $T_J = -55$ to 150°C , $V_I = 19\text{V}$, $I_O = 500\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$ unless otherwise specified).

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	$T_J = 25^\circ\text{C}$	11.5	12	12.5	V
V_O	Output Voltage	$I_O = 5\text{ mA to }1\text{ A}$ $P_O \leq 15\text{W}$ $V_I = 15.5\text{ to }27\text{ V}$	11.4	12	12.6	V
$\Delta V_O(^*)$	Line Regulation	$V_I = 14.5\text{ to }30\text{ V}$ $T_J = 25^\circ\text{C}$			120	mV
		$V_I = 16\text{ to }22\text{ V}$ $T_J = 25^\circ\text{C}$			60	
$\Delta V_O(^*)$	Load Regulation	$I_O = 5\text{ mA to }1.5\text{ A}$ $T_J = 25^\circ\text{C}$			100	mV
		$I_O = 250\text{ to }750\text{ mA}$ $T_J = 25^\circ\text{C}$			60	
I_d	Quiescent Current	$T_J = 25^\circ\text{C}$			6	mA
ΔI_d	Quiescent Current Change	$I_O = 5\text{ mA to }1\text{ A}$			0.5	mA
		$V_I = 15\text{ to }30\text{ V}$			0.8	
$\Delta V_O/\Delta T$	Output Voltage Drift	$I_O = 5\text{ mA}$		1.5		mV/ $^\circ\text{C}$
eN	Output Noise Voltage	$B = 10\text{Hz to }100\text{KHz}$ $T_J = 25^\circ\text{C}$			40	$\mu\text{V}/V_O$
SVR	Supply Voltage Rejection	$V_I = 15\text{ to }25\text{ V}$ $f = 120\text{Hz}$	61			dB
V_d	Dropout Voltage	$I_O = 1\text{ A}$ $T_J = 25^\circ\text{C}$		2	2.5	V
R_O	Output Resistance	$f = 1\text{ KHz}$		18		m Ω
I_{sc}	Short Circuit Current	$V_I = 35\text{ V}$ $T_J = 25^\circ\text{C}$		0.75	1.2	A
I_{scp}	Short Circuit Peak Current	$T_J = 25^\circ\text{C}$	1.3	2.2	3.3	A

(*) 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 cycle is used.

ELECTRICAL CHARACTERISTICS OF L7815 (refer to the test circuits, $T_J = -55$ to 150°C , $V_I = 23\text{V}$, $I_O = 500\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$ unless otherwise specified).

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	$T_J = 25^\circ\text{C}$	14.4	15	15.6	V
V_O	Output Voltage	$I_O = 5\text{ mA to }1\text{ A}$ $P_O \leq 15\text{W}$ $V_I = 18.5\text{ to }30\text{ V}$	14.25	15	15.75	V
$\Delta V_O(^*)$	Line Regulation	$V_I = 17.5\text{ to }30\text{ V}$ $T_J = 25^\circ\text{C}$			150	mV
		$V_I = 20\text{ to }26\text{ V}$ $T_J = 25^\circ\text{C}$			75	
$\Delta V_O(^*)$	Load Regulation	$I_O = 5\text{ mA to }1.5\text{ A}$ $T_J = 25^\circ\text{C}$			150	mV
		$I_O = 250\text{ to }750\text{ mA}$ $T_J = 25^\circ\text{C}$			75	
I_d	Quiescent Current	$T_J = 25^\circ\text{C}$			6	mA
ΔI_d	Quiescent Current Change	$I_O = 5\text{ mA to }1\text{ A}$			0.5	mA
		$V_I = 18.5\text{ to }30\text{ V}$			0.8	
$\Delta V_O/\Delta T$	Output Voltage Drift	$I_O = 5\text{ mA}$		1.8		mV/ $^\circ\text{C}$
eN	Output Noise Voltage	$B = 10\text{Hz to }100\text{KHz}$ $T_J = 25^\circ\text{C}$			40	$\mu\text{V}/V_O$
SVR	Supply Voltage Rejection	$V_I = 18.5\text{ to }28.5\text{ V}$ $f = 120\text{Hz}$	60			dB
V_d	Dropout Voltage	$I_O = 1\text{ A}$ $T_J = 25^\circ\text{C}$		2	2.5	V
R_O	Output Resistance	$f = 1\text{ KHz}$		19		m Ω
I_{sc}	Short Circuit Current	$V_I = 35\text{ V}$ $T_J = 25^\circ\text{C}$		0.75	1.2	A
I_{scp}	Short Circuit Peak Current	$T_J = 25^\circ\text{C}$	1.3	2.2	3.3	A

(*) 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 cycle is used.