

Refer to the test circuits, $T_J = 0$ to $125\text{ }^\circ\text{C}$, $V_I = 10\text{ V}$, $I_O = 500\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$ unless otherwise specified^(h).

Table 10. Electrical characteristics of L7805C

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
V_O	Output voltage	$T_J = 25^\circ\text{C}$	4.8	5	5.2	V
V_O	Output voltage	$I_O = 5\text{ mA}$ to 1 A , $V_I = 7$ to 18 V	4.75	5	5.25	V
V_O	Output voltage	$I_O = 1\text{ A}$, $V_I = 18$ to 20 V , $T_J = 25^\circ\text{C}$	4.75	5	5.25	V
$\Delta V_O^{(1)}$	Line regulation	$V_I = 7$ to 25 V , $T_J = 25^\circ\text{C}$		3	100	mV
		$V_I = 8$ to 12 V , $T_J = 25^\circ\text{C}$		1	50	
$\Delta V_O^{(1)}$	Load regulation	$I_O = 5\text{ mA}$ to 1.5 A , $T_J = 25^\circ\text{C}$			100	mV
		$I_O = 250$ to 750 mA , $T_J = 25^\circ\text{C}$			50	
I_d	Quiescent current	$T_J = 25^\circ\text{C}$			8	mA
ΔI_d	Quiescent current change	$I_O = 5\text{ mA}$ to 1 A			0.5	mA
		$V_I = 7$ to 23 V			0.8	
$\Delta V_O/\Delta T$	Output voltage drift	$I_O = 5\text{ mA}$		-1.1		mV/°C
eN	Output noise voltage	$B = 10\text{ Hz}$ to 100 kHz , $T_J = 25^\circ\text{C}$		40		$\mu\text{V}/V_O$
SVR	Supply voltage rejection	$V_I = 8$ to 18 V , $f = 120\text{ Hz}$	62			dB
V_d	Dropout voltage	$I_O = 1\text{ A}$, $T_J = 25^\circ\text{C}$		2		V
R_O	Output resistance	$f = 1\text{ kHz}$		17		m Ω
I_{sc}	Short circuit current	$V_I = 35\text{ V}$, $T_J = 25^\circ\text{C}$		0.75		A
I_{scp}	Short circuit peak current	$T_J = 25^\circ\text{C}$		2.2		A

1. 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.

h. Minimum load current for regulation is 5 mA.