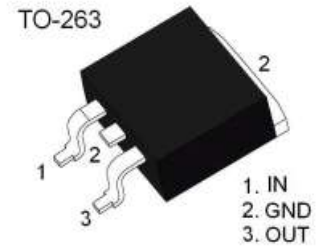


## L7805-1.5A

## 3 TERMINAL 1.5A POSITIVE VOLTAGE REGULATORS

### FEATURES

1. Internal Thermal Overload Protection.
2. Internal Short Circuit Current Limiting.
3. Output Current up to 1.5A.



### Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified, $T_{amb}=25^{\circ}\text{C}$ )

CHARACTERISTICS	SYMBOL	Value	UNITS
Input Voltage	$V_{IN}$	35	V
Output Current	$I_{OUT}$	1.5	A
Operating Temperature Range	$T_{opr}$	-20~125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^{\circ}\text{C}$

Operating Conditions:  $V_i=10\text{V}$ ,  $I_o=500\text{mA}$ ,  $C_i=0.33\mu\text{F}$ ,  $C_o=0.1\mu\text{F}$ ,  $0^{\circ}\text{C}<T_j<125^{\circ}\text{C}$  Unless otherwise specified

Parameter Name	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_j=25^{\circ}\text{C}$	4.80	5.00	5.20	V
		$7\text{V}\leq V_i\leq 20\text{V}$ , $I_o=5\text{mA}\sim 1.0\text{A}$	4.75		5.25	V
Load Regulation	$\Delta V_o$	$T_j=25^{\circ}\text{C}$ ; $I_o=5\text{mA}\sim 1.5\text{A}$		9	100	mV
		$T_j=25^{\circ}\text{C}$ ; $I_o=250\text{mA}\sim 750\text{mA}$		4	50	mV
Line Regulation	$\Delta V_o$	$T_j=25^{\circ}\text{C}$ ; $7\text{V}\leq V_i\leq 25\text{V}$		4	100	mV
		$T_j=25^{\circ}\text{C}$ ; $8\text{V}\leq V_i\leq 12\text{V}$		1.6	50	mV
Quiescent Current	$I_q$	$T_j=25^{\circ}\text{C}$ ; $I_o=0\text{mA}$		5.0	8	mA
Quiescent Current Change	$\Delta I_q$	$7\text{V}\leq V_i\leq 25\text{V}$			1.3	mA
		$5\text{mA}\leq I_o\leq 1.0\text{A}$			0.5	mA
Output Noise Voltage	eN	$f=10\text{Hz to } 100\text{kHz}$ , $T_a=25^{\circ}\text{C}$		42		$\mu\text{V}$
Temperature Coefficient of Output Voltage	$\Delta V_o/\Delta T$	$I_o=5\text{mA}$		0.8		$\text{mV}/^{\circ}\text{C}$
Ripple Rejection Ratio	RR	$8\text{V}\leq V_i\leq 18\text{V}$ ; $f=120\text{Hz}$ ; $T_j=25^{\circ}\text{C}$	62	73		dB
Dropout Voltage	$V_d$	$I_o=1.0\text{A}$ , $T_j=25^{\circ}\text{C}$		2		V
Output resistance	$R_o$	$f=1\text{kHz}$		15		$\text{m}\Omega$
Short circuit current	$I_{sc}$	$V_i=35\text{V}$ , $T_a=25^{\circ}\text{C}$		230		mA
peak curren	$I_{pk}$	$T_j=25^{\circ}\text{C}$		2.2		A

## Typical Characteristics

