

DIP Type

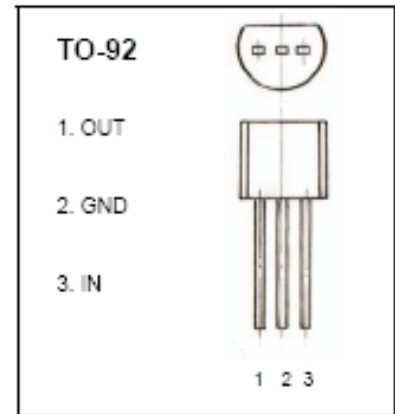
Integrate Circuit

Three-terminal positive Voltage Regulator

78L12

■ Features

- Maximum Output current: $I_{OM}=0.1\text{ A}$
- Output voltage: $V_O=12\text{ V}$
- Continuous total dissipation: $P_D=0.625\text{ W}$


■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	-55 to 125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics ($V_I=19\text{ V}$, $I_O=40\text{ mA}$, $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$, $C_i=0.33\text{ }\mu\text{F}$, $C_o=0.1\text{ }\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Output voltage	V_O	$T_J=25^\circ\text{C}$	11.5	12	12.5	V
		$14\text{ V} \leq V_I \leq 27\text{ V}$, $I_O=1\text{ mA}-40\text{ mA}$	11.4	12	12.6	V
		$I_O=1\text{ mA}-70\text{ mA}$	11.4	12	12.6	V
Load Regulation	ΔV_O	$T_J=25^\circ\text{C}$, $I_O=1\text{ mA}$ to 100 mA		22	100	mV
		$T_J=25^\circ\text{C}$, $I_O=1\text{ mA}$ to 40 mA		13	50	mV
Line regulation	ΔV_O	$14.5\text{ V} \leq V_I \leq 27\text{ V}$, $T_J=25^\circ\text{C}$		55	250	mV
		$16\text{ V} \leq V_I \leq 27\text{ V}$, $T_J=25^\circ\text{C}$		49	200	mV
Quiescent Current	I_q	$T_J=25^\circ\text{C}$		4.3	6.5	mA
Quiescent Current Change	ΔI_q	$16\text{ V} \leq V_I \leq 27\text{ V}$			1.5	mA
	ΔI_q	$1\text{ mA} \leq I_O \leq 40\text{ mA}$			0.1	mA
Output Noise Voltage	V_N	$10\text{ Hz} \leq f \leq 100\text{ KHz}$		70		μV
Ripple Rejection	RR	$15\text{ V} \leq V_I \leq 25\text{ V}$, $f=120\text{ Hz}$, $T_J=25^\circ\text{C}$	37	42		dB
Dropout Voltage	V_d	$T_J=25^\circ\text{C}$		1.7		V

■ Typical Application

