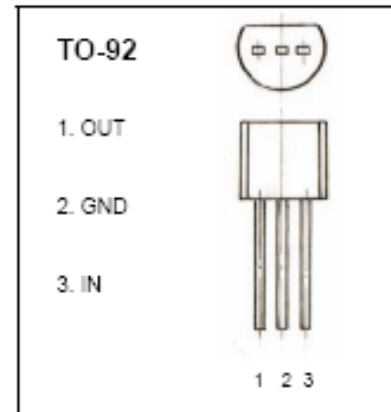


## Three-Terminal Positive Voltage Regulator 78L08

■ Features

- Maximum output current:  $I_{OM}=0.1A$ .
- Output voltage:  $V_o=8V$ .
- Continuous total dissipation:  $P_D=0.625W$



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

Parameter	Symbol	Rating	Unit
Input Voltage	$V_i$	30	V
Operating junction temperature range	$T_{OPR}$	-55 to +125	$^\circ C$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ C$

■ Electrical Characteristics ( $V_i=14V, I_o=40mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33 \mu F, C_o=0.1 \mu F$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	$V_o$	$T_j=25^\circ C$	7.7	8.0	8.3	V
		$10.5V \leq V_i \leq 23V, I_o=1mA-40mA$	7.6	8.0	8.4	V
		$I_o=1mA-70mA$	7.6	8.0	8.4	V
Load regulation	$\Delta V_o$	$T_j=25^\circ C, I_o=1mA-100mA$		18	80	mV
		$T_j=25^\circ C, I_o=1mA-40mA$		10	40	mV
Line regulation	$\Delta V_o$	$10.5V \leq V_i \leq 23V, T_j=25^\circ C$		42	175	mV
		$11V \leq V_i \leq 23V, T_j=25^\circ C$		36	125	mV
Quiescent current	$I_q$	$25^\circ C$		4	6	mA
Quiescent current change	$\Delta I_q$	$11V \leq V_i \leq 23V$			1.5	mA
	$\Delta I_q$	$1mA \leq I_o \leq 40mA$			0.1	mA
Output noise voltage	$V_N$	$10Hz \leq f \leq 100KHz$		54		$\mu V$
Ripple rejection	RR	$13V \leq V_i \leq 23V, f=120Hz, T_j=25^\circ C$	37	46		dB
Dropout voltage	$V_d$	$T_j=25^\circ C$		1.7		V

■ Typical Application

