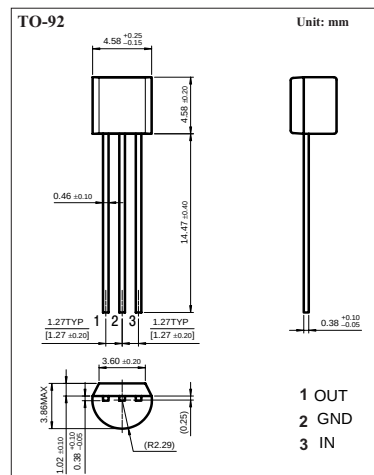


Three-Terminal Positive Voltage Regulator

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	ΔV_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	ΔV_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	ΔI_q	$11V \leq V_I \leq 23V$			1.5	mA
	ΔI_q	$1mA \leq I_O \leq 40mA$			0.1	mA
Output noise voltage	V_N	$10Hz \leq f \leq 100KHz$		54		μV
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

