

### WEJ78L08 Three-terminal positive voltage regulator

#### FEATURE

Maximum Output current

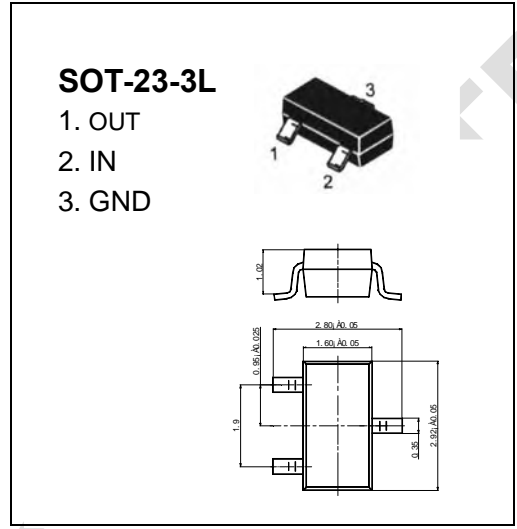
$I_{OM}: 0.1 \text{ A}$

Output voltage

$V_o: 8 \text{ V}$

Operating and storage junction temperature range

$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$



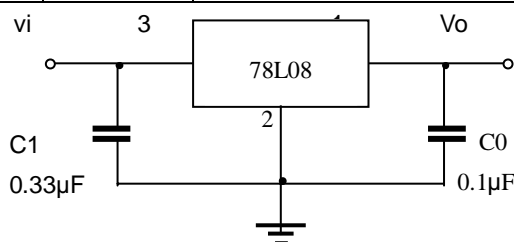
#### ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	$V_I$	30	V
Operating Junction Temperature Range	$T_{OPR}$	0~+125	°C
Storage Temperature Range	$T_{STG}$	-55~+150	°C

#### ELECTRICAL CHARACTERISTICS ( $V_I=14V, I_o=40mA, 0^\circ\text{C}<T_J<125^\circ\text{C}, C_1=0.33\mu\text{F}, C_o=0.1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_J=25^\circ\text{C}$	7.7	8.0	8.3	V
		$10.5V \leq V_I \leq 23V, I_o=1mA \sim 40mA$	7.6	8.0	8.4	V
		$10.5V \leq V_I \leq V_{MAX}, I_o=1mA \sim 70mA$	7.6	8.0	8.4	V (note)
Load Regulation	$\Delta V_o$	$T_J=25^\circ\text{C}, I_o=1mA \sim 100mA$		18	80	mV
		$T_J=25^\circ\text{C}, I_o=1mA \sim 70mA$		10	40	mV
Line regulation	$\Delta V_o$	$10.5V \leq V_I \leq 23V, T_J=25^\circ\text{C}$		42	175	mV
		$11V \leq V_I \leq 23V, T_J=25^\circ\text{C}$		36	125	mV
Quiescent Current	$I_q$	$25^\circ\text{C}$		4	6	mA
Quiescent Current Change	$\Delta I_q$	$11V \leq V_I \leq 23V$			1.5	mA
	$\Delta I_q$	$1mA \leq V_I \leq 40mA$			0.1	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$		54		uV
Ripple Rejection	RR	$13V \leq V_I \leq 23V, f=120\text{Hz}, T_J=25^\circ\text{C}$	39	70		dB
Dropout Voltage	$V_d$	$T_J=25^\circ\text{C}$		1.7		V

#### TYPICAL APPLICATION



Note 1: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.